

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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BALTIMORE, AUGUST 22, 1907.

Mr. John W. Sibley, president of the
Sibley-Menge Press Brick Co. of Bir-
mingham, Ala., referring to the progress
made by the company, says:

We attribute a large measure of this suc-
cess to the advertising in your valuable
paper and the quick information received
through the medium of the *Daily Bulletin*.

MILLS IN THE MOUNTAINS.

The *News and Courier* of Charles-
ton in referring to the fact that a cot-
ton mill is to be built in the Blue Ridge
mountain section of North Carolina
rather expresses surprise at such a
move, but takes it as an indication of
the fact that the builders of this mill
are seeking the mountain regions in
order to be close to a supply of labor.
It is quite true that the great mountain
region stretching from Southwest Vir-
ginia to Northern Alabama has a large
supply of unutilized labor. But the
movement looking to the building of
mills in this section will have other in-
fluences back of it in addition to labor.
In this mountain district is to be found
a climate which, taken all the year
round, is probably not rivaled else-
where in America. It is invigorating
and life-giving, furnishing the ideal
conditions for the very best develop-
ment of the highest type of skilled la-
bor. There is, moreover, another ad-
vantage which it possesses. Many years
ago a close student of climatic condi-
tions pointed out in the MANUFAC-
TURERS' RECORD that nowhere else in the
world could such a climate be found
for the highest possible make of fine

goods as in these mountain regions. In
the great gorges there can be found a
humidity more desirable for fine spin-
ning than can possibly be artificially
produced, and far better than nature
has given to Manchester, England, or
New Bedford, Mass. With mills lo-
cated at these points and the mill vil-
lage on the surrounding mountains,
there would be obtained such condi-
tions for fine spinning and for the
health of operatives as could not be du-
plicated elsewhere. Moreover, the
abundance of water-power in these
mountain districts will give the cotton
mills the cheapest of electric power.
The great industrial development in
the mountain regions of Northern Italy
and parts of Austria and in Switzer-
land, where the finest quality of cot-
ton goods is produced, will be duplicated
in the mountainous section of the South.
This mountain region, indeed, is a veri-
table treasure-house, where climate,
water-power, good soil and all possible
conditions for living make certain the
highest form of industrial activity. The
News and Courier need not be surprised
to see many cotton mills established
within the next few years in the heart
of the Blue Ridge country.

SANITY OR STAGNATION FOR THE SOUTH?

According to a statement in the *Savannah News* made by Mr. C. C. Esdale,
general manager of a car-wheel works,
with plants in Alabama and Georgia,
the retrenchment policy of the railroads
under the strain of recent legislation is
beginning to be felt by the manufac-
turers of car wheels and by other indus-
tries. Mr. Esdale said:

This is due to the aggressive legislation of
the Alabama and Georgia Legislatures. The
railroads are being so legislated against that
they do not know where they stand, and they
have shut down on new improvements and
are purchasing just such things as are neces-
sary.

The car-wheel companies are not the only
companies that are suffering. In fact, this
big decrease in business is felt in every
branch of the general supply men. The lumber
men, the brass men, the iron men and the
suppliers of everything which goes into the
make-up of the railroad are suffering from
the antagonistic position the Legislatures
have assumed toward the railroads.

With this should be read the following
circular-letter from the banking
firm of Wilson, Colston & Co. of Balti-
more, published in the Charlotte (N. C.)
Observer:

We are pioneers in the introduction of
Southern securities into friendly markets,
and this was very soon after the war, and
we have since done as much as any other
house in maintaining an interest in such
securities and in providing capital for the
development of the South.

We view, therefore, with regret and apprehension
the present attitude of the Southern
people, through their Legislatures, toward
that capital. They do not pause to consider
that many millions of dollars were lost in
Southern securities before they got on a
paying basis. If you allow for all these
losses, it will be found that there is no
"water" in Southern securities.

This attitude will surely have one effect—that
capital will not continue to go into the
South as it has gone. It is of no use to re-
peat that oft-quoted saying, "The South is
going to be the richest section of the coun-

try." Other growing and developing sections
have been built up by the use of outside
capital.

Consider for a moment where the Southern
communities would be now if all the railroad,
city, street railway, water, gas, etc., bonds
had had to be placed on local investments, or
the communities be without those facilities
which they now enjoy.

Let a real concern for the true interests
of the South take the place of the present
situation or suffer the inevitable conse-
quences, which are apparent already.

These are statements worthy of sober
consideration on the part of everybody
concerned for the welfare of the South.
Both of them have behind them names
of substantial individuals whose friend-
liness for the South cannot be ques-
tioned. Neither of them is of Wall
Street or of Washington, and neither
of them can warrant the charge of hav-
ing been inspired by anything but plain
common sense and proper appreciation
of a situation for which there is less
justification in the South, perhaps, than
in any other part of the country. Both
statements bear out the warnings that
have been given from time to time re-
cently that legislation unduly hostile
to the railroads could not possibly fail
to work ill upon general conditions in
the country, no matter how sound, eco-
nomically, such conditions might be.

Granted that the railroads have been
at fault, granted that antagonistic leg-
islation in certain Southern States has
been promoted in the sincere belief that
it would be beneficial, the extremes to
which such legislation has been pushed
in many instances, extremes overbal-
ancing any failings or any aggressions
of the railroads in the past, are now
beginning to bear fruit not only in tend-
ing to cripple the operations of the rail-
roads by making it impossible for them
to render the service necessary for the
healthy development of the States
through which they run, but also in
putting unnecessary and menacing
brakes upon the wheels of industries
largely dependent for continued success
upon the steady call from the railroads
for their products. From that may be
reasonably expected a letting-up in lum-
bering, mining and other basic under-
takings of production, which, of course,
would mean a reduction in the working
forces of the country, a diminution of
their purchasing power, and, conse-
quently, a narrowing of the markets for
the farmers.

The letter from the Baltimore banking
firm reveals another drawback re-
sulting from ill-considered attempts to
adjust the relations of the railroad cor-
poration and "the people"—the proba-
bility that, being logical, capital other-
wise willing to invest and necessary to
assure Southern progress in all lines
will argue that legislation aimed
against a particular kind of corpora-
tion may ultimately be expanded so as
to include all corporations within its
Upas shadow, and, therefore, that all
investments would be unsafe. Action
upon such logic would still further re-
strict productive energies, and would
not merely bring to a standstill the
parts affected by the legislation, but
would lead to their retrogression.

Contemplation of such probabilities
ought to awaken the South to its dan-
ger and compel a suspension of the wild
drive now being made against the rail-
roads in three or four States. It seems
to be a case either of suspension of the
agitation or of more or less stagnation in
materialities.

That the danger is beginning to be
appreciated is indicated by editorial
comments of a number of Southern
newspapers reproduced on other pages
of this week's issue of the MANUFAC-
TURERS' RECORD—comments shedding
the light of hope upon an otherwise
baffling situation.

SOUTHERN IRON PRODUCTION.

Mr. Edwin C. Eckel, for many years
one of the foremost authorities of the
country on iron and cement matters, in
this week's issue of the MANUFAC-
TURERS' RECORD discusses the development
of the iron industry of the South, em-
phasizing the points recently made by
the MANUFAC-
TURERS' RECORD that in
iron-making the South has not kept
pace with the rest of the country. The
reasons for this are not from lack of
raw materials, but from other condi-
tions, which Mr. Eckel clearly points
out.

Bearing on the same subject, we pub-
lish an interesting editorial opinion of
the *Iron Trade Review* of Cleveland, in
which the *Review* makes the statement:

An era of new blast-furnace erection in
the United States is just drawing to its
close. The next may be soon or far in the
future; but whenever it may be, then the
South will surely come into its own.

This timely discussion, called forth
by recent editorials in the MANUFAC-
TURERS' RECORD upon the subject, should
stir the South to a careful investigation
of how to make the best use of its vast
natural advantages for iron and steel
production.

FINANCING RAILROADS AT HOME.

In the present state of the money
markets, when high rates are burden-
ing enterprise and industry in various
lines, the disposition in several parts of
Texas to finance some new railroads at
home impresses observers with more
than ordinary force. The latest of such
projects seeking the support of home
capital are the two electric railroad
plans for the territory between Fort
Worth and Mineral Wells. The pro-
moters of each of these have sought and
have secured the co-operation of local
people, and liberal subscriptions to the
stock of each are reported, with the
prospect that construction will be started
upon both of the proposed routes. Other
railway enterprises which are
likewise enlisting the support of home
capital are the People's Railway Co. at
Canton, Texas, and the Panhandle
Short Line at Hereford, Texas. Both
of these are said to have made consider-
able progress, and the latter is men-
tioned as having construction under
way. At other points in the same State

other railroad promoters are adopting similar methods.

The soliciting and securing of home capital to build railroads will prove beneficial in more than one way. It will afford the subscribers to the capital stock a deeper personal interest in the various companies and lead them to do all in their power to make them successful, which they would probably not be likely to do if the lines were built by outside capital, and it will, moreover, give them practical experience of the railroad business from the railroad man's point of view that will be valuable to them, in that it will doubtless influence their future actions with reference to legislation about transportation companies, thus securing laws weighed with deliberation and justice before they are put upon the statute-books. It is a failing of human nature to underestimate the difficulties of the other fellow's business and to magnify its profits, and the railroads have come in, especially in Texas, for a large share of hard knocks during the year.

There are other Southern States in which the securing of home capital for new railroad plans is also being sought, but it need not be imagined that so much money will be obtained as to render unnecessary the enlistment of funds from other parts of the country. A large proportion of capital at home is usually so employed that it cannot be diverted to railroad purposes, and foreign capital is necessarily required in greater or less degree. The success of a number of enterprises which are now awaiting more favorable money conditions will, therefore, be advanced if the general attitude of the people in the regions to benefit therefrom is such as to invite instead of deter investments.

SAN FRANCISCO.

One of the most gratifying and encouraging letters which the MANUFACTURERS' RECORD has received in its 25 years' work is one written by Mr. Rufus P. Jennings, chairman of the California Promotion Committee of San Francisco, bearing upon the work of our special correspondent, Mr. Albert Phenix, on the Pacific Coast. Mr. Jennings writes:

I wish to acknowledge the indebtedness of San Francisco to the MANUFACTURERS' RECORD and to Mr. Albert Phenix, whom you sent here to investigate conditions for the splendid article which has just appeared in your paper. Of all of those who have come to San Francisco studying our conditions and writing of them, no one has shown a clearer, clear perception, nor expressed it in a more concise and convincing manner, than the author of this article in your paper, and I feel that it is due to you and him also that we should acknowledge our full appreciation of the magnificent expression he has given of San Francisco conditions. I am enclosing you herewith a copy of the editorial which appeared this morning in the San Francisco *Call*. We have taken the liberty of calling the attention of the various newspapers of California to this article, and this editorial is the first result. I am sure that the MANUFACTURERS' RECORD will get a wide advertisement in California for this article.

The editorial of the San Francisco *Call* to which Mr. Jennings refers is as follows:

The MANUFACTURERS' RECORD of Baltimore, under the title "San Francisco: Type of American Vigor," addresses itself to the condition existing here. The Baltimore press has been, as a rule, remarkably just in its criticism of San Francisco. Fresh from a great fire of its own, its people understood, in a measure, the almost insurmountable obstacles that were here presented. Says the MANUFACTURERS' RECORD:

"Because on these shores of the lordly San Francisco bay it is inexorably decreed that there shall be one of the great cities of the world; because the development of this State, this nation and of all the countries that border on every part of the Pacific

ocean would build a vast mart of commerce here were every dollar of present investment utterly destroyed and the city's site reduced to the barren and unpeopled sand dunes which marked its primitive state, it is worth while to attempt an analysis of the conditions that really do obtain; to take stock, as it were, and determine what the salvage is; to note the flotsam and the jetsam and to undertake a true appraisement of the value of all the elements that enter into the present condition of affairs."

The correspondent then proceeds to analyze the local trade and financial outlook. Summing up these and setting them beside the untoward events in politics and the industrial world, which are being met in the spirit that "it is all in the day's work, for it isn't in the stars that San Francisco can lose," he says:

"And from this point of view, this attitude does not come from any mere happy-go-lucky recklessness or indifference to fate. It is because the San Franciscan knows what is behind him, knows of the rock whereon he stands, that he simply smiles and keeps on his old gait. He has confidence in himself, for he has tried himself out. He has confidence in his city and in his State, for he knows a vigorous people are developing their resources and he knows what they will do. He may have to go out into the markets of the world to borrow money for a while, which is a strange experience and an awkward predicament for him, but he knows that the wealth of an empire will continue to flow into San Francisco's lap, and that abounding prosperity will never depart from these shores."

Even the worst pessimists have long ago got through speculating as to whether or not we have a future. For a time it seemed as if we were making too rapid progress—more rapid than materials and men could be got together. We have started now on a steady gait and conditions are much healthier. The wild scramble toward rebuilding, while it evidenced the true spirit of enterprise backed by faith, had its evil results. One man bid against another and exorbitant prices followed as a natural sequence. San Francisco is working out its own salvation and is performing wonders.

DIAMOND LIGHT ON THE SOUTH.

Interesting as was the announcement of the discovery of diamonds in Arkansas, in place, according to the language of geology, the discovery seems to have been taken largely as a matter of course, a mere emphasis of the wonderful resourcefulness of nature in the South. And, as a matter of fact, the production of diamonds may hardly be expected to swell appreciably the wealth of the South, even though it promises to be quite a profitable undertaking. There is such an attractive glitter about diamonds, though, that their relative value in general production may not be fully comprehended without some thought as to other products. Take, for instance, that dusky diamond, coal. It is known that at least 62,000 square miles of the South is underlaid with coal, the total deposits aggregating probably 500,000,000 tons. At 10 cents a ton, almost a ridiculously low figure, these dusky diamonds are worth \$50,000,000,000, and the South is mining them at the rate of about \$90,000,000 worth a year. That is about twice the value of the annual production of diamonds in the whole world. There is one estimate that the total value of all the diamonds known in the world is about \$1,000,000,000. Those values have been increasing through many centuries, most of them, however, having been gained in the past century, especially since the opening of the South African mine, 30 years ago. Since then about \$400,000,000 worth of diamonds in the rough have been produced in that field. That total of 30 years' production should be compared with the \$800,000,000 worth of cotton and its seed grown from the planting in the South last year, or with the \$391,000,000 worth of Southern corn grown in that year, while the value of the total agricultural production of the South last year, \$2,000,000,000, was

double the estimated value of all the known diamonds. Indeed, last year's crop of Southern hay, valued at \$34,899,200, was worth more than the year's production of diamonds in the world. The fields of dusky diamonds, just like the fields of the sparklers, are inexhaustible. The field of production of agricultural wealth can be made inexhaustible.

PARADOXICAL.

Out of the smoke of the conflict in Alabama between the railroads and the State comes a curious bit of news from Montgomery to the effect that the State Tax Commission had placed itself unanimously on record that the franchise tax upon a railroad in course of construction be suspended until the railroad is in operation and possessed of sufficient earning capacity to stand the tax without interfering with its earnings.

Pretty nearly every other department of the government in that State seems to have a different view about the railroads, a view shared by Legislatures of some other Southern States, who in providing for a fixed rate of fare for the railroads do not seem to contemplate the possibility that such arbitrary action may possibly reduce the incomes of the railroads to a point below their earnings, and, consequently, may throw them into the hands of receivers to the great loss of thousands of stockholders—owners—of the roads.

ON PUBLICITY.

In an interview at Washington regarding the use of concrete in construction Mr. Richard L. Humphrey of the United States Geological Survey makes a very clear distinction between concrete as a material and the conditions under which the material is used. The distinction is a timely one, for, as Mr. Humphrey points out, the failure of a reinforced concrete structure, by reason of improper design, poor materials or bad workmanship, is no more an argument against the use of concrete than the collapse of a steel structure under similar conditions is an argument against the use of structural steel. The statement is particularly timely because of attempts which have been made under the guise of news service by publicity attorneys in the interest of individuals who imagine that their business is threatened by the steady growth of the use of concrete in construction to confuse the issues and to attribute structural failures not to the real causes, improper use of concrete, but to the concrete itself. There is room for many kinds of material in building, and it is amazing how anybody engaged in the production of one kind of material which he believes to be superior can bring himself to depend upon publicity methods seeking to popularize his material by assaulting other material. Money spent upon such publicity is money wasted, because the buyers of material are thoroughly cognizant of the scheme of such publicity methods and are more than likely to act exactly contrary to the purpose of the publicity under the conviction that goods that cannot sell upon their own merits are not worth buying.

There cannot be too much publicity about a good article, but the way to promote that is through legitimate channels, and not by way of middlemen, who persuade their paying patrons that newspapers of influence may be led to publish almost any matter, provided it is furnished to them free of cost.

TEXAS VALUATIONS.

Complete returns from 238 counties of Texas and estimated returns from the 28 other counties give a total assessed value

of property in that State this year of \$1,579,659,611. That is an increase over 1906 of \$358,499,742. This increase alone is more than \$47,000,000 greater than the total assessed value of property in Texas in 1880.

COAL IN THREE STATES.

In 1906 Kentucky mined 9,653,647 short tons of coal, an increase over 1905 of 1,221,124 tons; Tennessee mined 6,259,275 tons, an increase of 295,879 tons, and West Virginia mined 43,290,350 tons, an increase of 3,045,741 tons. West Virginia now ranks second in coal production in this country. Bearing upon the West Virginia situation the United States Geological Survey says:

"It is probable that within the next few years the growth of the coal-mining industry of the State will be even greater than that already shown. The most important development will follow the completion of the Virginian, formerly the Deepwater-Tidewater Railway, from Sewalls Point, near Norfolk, to the coal fields of the southern portion of West Virginia. This road penetrates areas containing the Pocahontas, New River and Kanawha coals, most of them in their highest development. The Coal & Coke Railroad, from Elkins to Charleston, with its branches, has opened up important fields in the center of the State, as has also the Kanawha & West Virginia Railroad. Other promising fields are being developed by branch lines of the Chesapeake & Ohio Railway on Piney creek and the Coal and Guyandotte rivers."

THE TREND IN THE SOUTH.

Some weeks ago the MANUFACTURERS' RECORD called attention to the fact that a plant in one of the iron and steel centers of the middle West had found it necessary to send to Georgia for an especially large casting to be used in its work. Somewhat earlier a Southern architect had built a large cotton mill in Massachusetts. The trend of things in the South thus indicated is emphasized by contracts recently completed by the J. F. Gallivan Building Co. of Greenville, S. C. This company is completing a dam for the Dan River Power & Manufacturing Co., and another for the Savannah River Power Co., and has other jobs at Charlotte, N. C., and at other points in the South and West. But of special interest is the statement of the company manager, Mr. J. F. Gallivan, that it has just completed a big plant at Welland, Ontario, for the Plymouth Cordage Co., another at Bridgeport, Conn., for the Ashcroft Manufacturing Co., and one at Fort Dodge, Iowa, for the Sackett Plaster Board Co.

TO FURTHER IMMIGRATION.

Messrs. John R. Walker and H. A. Hertz of the joint immigration committee, representing business bodies of Norfolk and Portsmouth, have obtained from President Paul Gottheil of the United States Shipping Co. of New York a promise to recommend the establishment of a passenger service between Norfolk and Hamburg as soon as he has the facts as to the prospect of Norfolk's contributing to the support of the service. The two gentlemen learned in New York that as a result of the recent visit of Hon. George W. Koiner, Commissioner of Agriculture and Immigration of Virginia, to Glasgow, Scotland, the Donaldson Line contemplates establishing a passenger service between that city and Norfolk.

Mr. A. Fairley, clerk of the city of Hattiesburg, Miss., has prepared a statement showing that since 1890 the total assessment of the city has increased from \$368,214 to \$6,987,171. The increase in 1906 over 1905 was \$2,525,336.

Awakening to Dangers in Southern Anti-Railroad Legislation.

TIME TO CALL A HALT.

[Charlotte (N. C.) *Observer*.]

We made reference a few days ago to the fact that a Charlotte banker had tried to negotiate certain Charlotte city notes through a Baltimore bank with which he has financial connections and had failed, the Baltimore bankers preferring, in view of the condition of the public mind in this State at this time, not to handle North Carolina securities. The firm is Wilson, Colston & Co., and it is composed of Southern people who have had much dealing in Southern securities. It carries no prejudice, therefore, against this section. In our financial department this morning will be found a circular-letter from it which merits attention.

The South is enjoying a period of abounding prosperity, due largely to the fact that it has been able to borrow in the great centers money with which to prosecute its enterprises, but when its credit is gone its development will end. That no man liveth to himself and no man dieth to himself is a fact which rests upon scriptural authority, and it is equally true of States and of sections of the United States. The South is a borrower, and its continued prosperity is contingent upon its continued ability to borrow. This will cease with the continued dominance of the demagogue whose isens begin and end with office, and it is high time for the people who are not after office to refuse to be played upon longer by those who are after nothing else. The farmer wants good prices for his products, to the end that he may enlarge his holdings, add to his stock, increase the comforts of his home and the attractiveness of his home surroundings, educate his children and have for his and their enjoyment the many good things of life which only money can buy. The merchant wants to sell more goods for the sake of the attendant profit; the mechanic wants steady work and good wages; the banker more deposits and to make more loans; the clerk a larger salary, and so with every man in every line of human endeavor—he wants to better his material condition, an ambition both natural and proper.

Why, then, why will these good people listen to siren songs and fall in the train of self-seekers who are leading away from everything that makes for the well-being of the people and the prosperity of the State; who care nothing for its credit abroad or for the material welfare of its people—nothing for them in any way except to crawl over their backs to political positions of emolument and power? It is time for the citizens to awake when they see their State's credit declining and the individual's interest threatened by assaults upon property rights, these assaults made because they are supposed to lead to popularity and preferment. It is a long time until the next election, but it is not too early to begin to think what the results of that election may mean to North Carolina.

FOR JUSTICE TO ALL.

[Rome (Ga.) *Tribune*.]

We suppose there cannot be any doubt that the railroads need some regulating, and are quite prepared to advocate conservative legislation on proper lines. Let such legislation be carefully considered, and the necessity for it be apparent, and neither the railroads nor anybody else will be able to offer any effective opposition. On the other hand, the wild-eyed politician who would confiscate the property of the railroads, who would damage and cripple them for no other reason than to gain a little notoriety and much political prestige, should be crushed out unmercifully and

his measures trampled in the dust. Let us go at these matters carefully and considerately and do justice to all parties.

BAITING THE CORPORATIONS.

[Tifton (Ga.) *Gazette*.]

Nothing is better known than that property in Georgia is being returned at pitiful mite of its true value, and that if the tax-dodger was brought to book there would be plenty and to spare to meet all needs of the State without inflicting unjust burdens on any. Yet, of the 250 zealous patriots who composed the General Assembly, not one had the manhood and courage to demand that taxes be equalized and that the shirker and dodger be brought to book! Because, forsooth, the individual taxpayer has a vote! Best add to the already heavy burden of incorporated capital, because the corporations cannot vote and it is popular to bait them just now.

DESERVED TO DIE.

[Columbus (Ga.) *Enquirer-Sun*.]

The Senate did the best piece of work it has yet accomplished when yesterday afternoon it killed the House bill placing a 1 per cent. tax on the gross income of all of the public utility corporations of the State and many others besides. It is doubtful if as much as 10 per cent. of the gross income of any corporation is left as a net income after all operating expenses are paid, and consequently a 1 per cent. gross income tax would in reality have been the equivalent of a 10 per cent. income tax, a burden which anyone can see would be unbearable. It is well that the Senate saw proper to kill this House measure, and to kill it by a decisive vote. With such a burden staring them in the face prospective investors in almost any line of industrial development would have fought shy of Georgia. Railroad building and development, new trolley lines, telephone extensions and other similar public utility enterprises would have practically ceased and Georgia would, for the time being, anyway, have been deprived of the aid of these great factors of civilization and development. Nothing could have been more disastrous to the industrial upbuilding of Georgia than the enactment of such a measure into law, and the entire State is under obligation to the Senate for having killed it.

HOPING FOR COMMON SENSE.

[Columbia (S. C.) *State*.]

Citizens of the South were acutely experiencing the losses and discomforts resulting from inefficient service about the time the war on railroads was declared in Washington. Many of them imagined that all roads were as rich as the Pennsylvania and all officials as regardless of the public interest as Harriman was represented to be, and before President Finley could inaugurate his policy of talking frankly to the public the Legislatures in several States reduced the passenger rates. They thought they were disciplining the railroads, and politicians did have much to do with disseminating that idea. But the roads had politicians on their side, also lawyers without discretion, and those succeeded in aggravating the troubles. * * *

The South needs for proper development the early investment of not less than \$200,000,000 in additional steam and long-distance electric railways and the development of dozens of waterways. That, too, in addition to the betterment of equipment, the improving of roadbeds, the elimination of curves and the lowering of grades on almost every mile of road in the territory. Those facts are recognized throughout the South; the necessity for transportation

facilities for development are as fully appreciated in this part of the country. All that is necessary is to appeal to the common sense of the people, the common sense of the State Legislatures and the justice of the State courts. There will be no war upon railroads; no industrial disaster.

HARRYING RESTRICTIONS.

[Anniston (Ala.) *Hot Blast*.]

Maybe the anti-railroad Legislatures of the various States that have been overdoing Secretary Root's advice to "get busy" will finally drive railroads to the necessity of demanding as a security to their investment an act incorporating common carriers under federal laws. Such a possibility was hinted at the other day by Congressman Townsend, who helped to frame the present interstate commerce law. Certain it is that railroads cannot operate successfully or profitably under the harrasing restrictions State Legislatures are placing around them. For that reason one of three things must inevitably happen: (1) The destruction of railroad property and the consequent check to Southern growth and progress; (2) the Federal incorporation of common carriers doing interstate business, or (3) the recovery of sanity and the sense of justice among Southern legislators.

STRANGLING TRADE ARTERIES.

[New Orleans (La.) *Picayune*.]

There is no question that the American people are eagerly determined to have railroad regulation and control, and they want it severe and strenuous. But it must not be forgotten that the railroad business cannot be effectively operated for the general good unless it be so regulated that the roads themselves shall be properly maintained and established as paying institutions to those with whose money they are built, equipped and operated. If these conditions cannot be realized, and if so long as these arteries of commerce remain in private ownership they are to be oppressed and strangled to satisfy popular resentment, then the sooner they shall become the property of the nation, under control of the central power, the better for all. The problem of railway regulation so as to secure the best conditions and results for commerce for the country and for the people is now before the public for settlement.

PUTTING A STOP TO PROGRESS.

[Wilmington (N. C.) *Messenger*.]

If the feeling of those Wall Street bankers toward North Carolina securities is that of capitalists generally the city will find it difficult to secure persons willing to take the bonds. Other cities in the State are preparing to sell bonds for making improvements. They also are directly concerned. Unless these bonds can be sold progress and development will be checked in all these cities. A stop will be put to such contemplated improvements as building water-works and making permanent improvements on the streets.

Besides those cities which are specially interested in the matter, it is one of concern to the entire State. It shows that North Carolina has for the time being destroyed her credit with outside capitalists; that they do not consider her county and municipal bonds as good securities; that they are afraid to invest their money here. North Carolina needs money for developing her resources. Unless she can induce capitalists from abroad to supply the needed funds the development must cease, or at least be greatly retarded. It is very unfortunate that such a state of affairs

should be brought about at this time as to frighten capital away from our State.

While the attitude of those Northern capitalists is to be deplored, one cannot blame them for not being willing to invest their money in this State under present conditions and so long as the policy of the State administration tends to reduce the value of securities. This war on corporations by the administration and the effort by some to stir up popular enmity against them is doing the State great harm, and will do still more unless there is a change. We make no apologies for the railroads or any other corporations which violate the law. All such offenders should be punished, but there is a right and a wrong way of doing everything. Because certain railroad officials violate the law there should not be such an onslaught upon corporate property and corporate rights. The innocent should not be made to suffer and property values decreased. That is the condition existing in this State today, and this New York dispatch shows what are the effects on the credit of the State.

FULL OF HARM.

[Macon (Ga.) *Telegraph*.]

Last year the *Cordele Rambler* was for "Hoke or bust." It got Hoke, but now doesn't want the "bust." Hear ye him: "There are a lot of politicians in the Georgia Legislature that don't hesitate at confiscation. Thinking people must stand by property interests during the present storm. Our democracy isn't worth a notch on a jaybird's tail with it turned loose if we don't protect our citizens' property, even if it should be such an unpopular possession as railroad stock. The reformers were right to demand that the Railroad Commission be elected by the people, but just think of the number of measures that are being hatched to make railroad stocks worthless. Every little old demagogue in the land has a harmful suggestion to make."

OUTLAWING DEVELOPERS.

[Florida *Times-Union*.]

The day of the corporation arrived by the will of the Republican party, as did the tariff. When the tariff begins to serve the South or when the South has adapted itself to tariff requirements all the conditions are changed. When the corporations take up the task of developing the South after developing the West they are outlawed. But the deeper grief is to find the men and the States of the South joining in these attacks on her business prosperity and her prescriptive rights.

UNCALLED-FOR HARASSING.

[Savannah (Ga.) *Press*.]

The railroads have played an all-important part in the growth and prosperity of the South. They have made gardens of our waste places and caused towns to spring up where the beasts of the field and the fowl of the air had been wont to exist in undisturbed serenity. The railroads, however unjustifiable some of their practices may seem, have been largely instrumental in raising this section from a condition of blasted hopes and utter penury to its present position of commercial and industrial eminence.

The *Press* is no special corporation pleader. This paper has prepared no brief in support of the railroads and cannot be accused of having any axe to grind. The *Press* only desires that absolute justice be done to every citizen of the State, whether natural or artificial. Unconditionally demanding that the railroad evils be corrected, the *Press* at the same time prays

that intelligence be used in the process and equity be not forgotten.

The placing of an enormous burden upon the railroads is equivalent to putting an insuperable obstacle in their development. The people of Georgia do not want cheap rates as much as they want fair rates. They do not care for good accommodations and schedules at the expense of the railroad companies. The spirit of fair play, so highly developed in our people, is opposed to senseless attacks and uncalled-for harassing. And particularly is gratuitous persecution deplorable when it is accompanied with a prospect of great and material stagnation.

OUTLAWING NOT JUSTICE.

[Montgomery (Ala.) *Advertiser*.]

This is one instance, but it can be duplicated all over Alabama. The railroads are builders of prosperity wherever they go. These are facts, but they do not give any railroad a right to impose unjust or unfair burdens on the community by taking advantage of their powers, neither do these facts give the people or the authorities any right to impose unjust burdens or obligations on the roads. Railroad corporations should receive the same fair and just treatment that is accorded to individuals, as far as circumstances will admit. They should be protected in their rights as individuals are. They should be taxed on the value of their property just as a citizen is taxed—no more, no less. If a railroad is not disposed to do justice to the State and the people, the law should force it to do so, and the law should see that it has protection in all its rights. That is equal and exact justice, and no more, but there seems to be a disposition to look on railroads as outlaws without any rights. That is not justice.

REGULATING RAILROADS.

[St. Louis *Republic*.]

Although many other things are undertaken in regulation, the fixing of a maximum rate raises every important legal question. The one of paramount importance, after all, is how far the authority of the Government may go in checking the collection of revenue by naming a maximum rate to be charged. In behalf of the railroads the fourteenth amendment to the Constitution of the United States has been invoked, and the sentence which provides that no State shall "deprive any person of life, liberty or property without due process of law" is depended upon to save the railroads from the disastrous effects of legislation that can be proved confiscatory in actual operation. Legal proceedings have actually halted in Missouri and North Carolina in order that the courts may have exact instead of merely theoretical understanding of the actual effect of newly-established statutory rates.

If the fourteenth amendment to the Constitution of the United States, adopted in 1866 without thought of the issue now up, is ultimately sustained by the Federal Supreme Court, the railroads can secure review by that high tribunal of all legislation of this class. The power of the individual State must yield even in respect to purely State business. But the establishment of Federal jurisdiction under the authority of the fourteenth amendment will far from simplify the problems awaiting adjudication. The courts will still have to determine when reduction of revenue would constitute a deprival of property "without due process of law." That is the problem of supreme gravity which jurists, publicists and people are now compelled to confront.

It is a problem of equity rather than of law, and its ultimate judicial determination must be reached by applying those great elemental principles of property right which in Anglo-Saxon jurisprudence

we term "common law." No statutory enactment can restrict the discretion of the courts if they have jurisdiction under the Constitution. Every law now in the statute books and every act that may hereafter be passed by Congress or a State Legislature can be brought to the bar of the Supreme Court if it holds jurisdiction under the fourteenth amendment. It will lie absolutely in the discretion of that court to declare that any particular act does not deprive the complainant of property without due process of law.

Until the court of last resort has adjudicated some of the pending cases the country will remain in doubt as to the conditions under which the exercise of the legislative power in the regulation of railroads will invite judicial restraint. For the present we are practically without precedents to indicate how far regulation may go without taking the form of confiscation. It is so completely an open question, therefore, that discussion is the natural prelude to platform phrasing and the best method of developing a correct party sentiment. Democrats have reason to be thankful that their leaders have taken up the subject in time to enable them to learn the party mind before they attempt to draw the party platforms.

POLITICS VS. JUDGMENT.

[Louisville (Ky.) *Herald*.]

It now looks as though the work of regulation might possibly be carried to an unreasonable extreme. There is grave danger of this in the South, where the idea of States rights is so strongly implanted, and where politics are too apt to prevail over sober judgment in dictating legislation. The South needs the development that can only be obtained through the encouragement of railroad enterprise. It is shortsighted policy to put obstacles in the way of extending lines that will open up new territory or to make conditions so burdensome that railroads will be discouraged from investing in new equipment and additional trackage.

FRYING PAN OR FIRE.

NARROWING THE CHOICE OF SOUTHERN RAILROADS.

Editor Manufacturers' Record:

I wish to express my appreciation of the editorial in your issue of the 15th, entitled "Southern Prosperity in the Balance." It puts the matter concisely and clearly. It is useless to close our eyes to the fact that untoward legislation has already affected investments in the South, and it needs no prophet to see that the tide will continue to set adversely to us just so long as this crazy legislation is so much in evidence.

There is one feature of recent legislation directed against the railroads that demands more than a passing notice. The opposition to a closer control over the railroads by the Federal Government is supposed to be stronger in the South than in any other portion of the country, and yet we are enacting legislation which will force the railroads to look more and more to Washington for protection against State legislation. The recent injunction issued by Judge Thomas G. Jones of Alabama, forbidding the State officials to interfere with the conduct of the Louisville & Nashville Railway, is a case in point. Among all of roads penetrating the industrial districts of the South there is none more important than the Louisville & Nashville. In iron, coal and coke it does the greater part of the business, and it has long been regarded as the greatest single factor in the wonderful development which has taken place in Alabama, Tennessee and Kentucky. It has striven all along to obey the laws and to work in harmony with every interest engaged in the advancement of Southern industries. And yet it

now finds itself compelled to appeal to Federal authority to protect its rights.

This is but a single case. Others might be adduced in support of the assertion that State legislation is driving the railroads to ask for protection at the hands of the General Government.

Just how far this movement will go it is at present impossible to say, but that it will go farther than it has already gone appears to be certain. The North Carolina and Virginia cases are closely similar. All of them show a manifest tendency to infringe upon rights which are of a national character, and not circumscribed by State boundaries. We decry Federal control of railroads, and yet at the same time are doing everything we can do to bring it about. Whether in the hands of the Federal authorities we would fare any better than we do now is another matter, and need not be discussed here. We may jump from the frying pan into the fire, but it is better to burn up all at once than to be slowly incinerated. But the frying pan is a Southern instrument of destruction, and its continued use may be an evidence of patriotism.

W. M. B. PHILLIPS.

Birmingham, Ala.

LIGNITE AND IRON ORE.

THEIR FORTUNATE ASSOCIATION IN EASTERN TEXAS.

[Special Cor. Manufacturers' Record.]

Rusk, Texas, August 15.

The prospective rehabilitation along modern lines of the Tassie Belle and the Star & Crescent furnaces, the completion of the pipe plant at the former and the erection of steel mills here add new interest to the brown coal, or lignite, deposits of this locality; not, however, that there is any present purpose to use this coal for smelting iron, but other industries must soon follow which will require large quantities of fuel for steam purposes, and for which brown coal has been proven to be the most economical fuel yet found in Texas.

At different periods of the recent past geologists have investigated Cherokee county brown coals, and invariably reported the existence of extensive deposits of a superior grade. It was after making one of those investigations that Prof. F. E. T. Dumble, State Geologist, wrote in his second annual report of the Geological Survey of Texas: "The fortunate association of lignite (brown coal) with the iron ores of the eastern part of the State makes them one of the most valuable mineral products the State possesses, and the time is not far distant when their high economic value in Texas iron smelting will be fully realized."

Within three miles of Rusk a vein of this coal is known to exist, and while it has never been worked to any great extent, yet it has been tested to a limited extent and found to be all right for domestic and blacksmiths' purposes.

This being a heavily-wooded country, people have never found it necessary to use other fuel than wood, and up to the present time we have not sufficient manufacturing enterprises to require large quantities of fuel for steam purposes, and hence there has been no incentive to develop these coal deposits.

In this place, and within a quarter mile of the Tassie Belle furnace, there was discovered in 1890 a six-foot vein of brown coal at a depth of 60 feet. A small quantity of this was taken out and tested both in stoves and blacksmiths' forges and found to be a superior quality of brown coal. Samuel D. Mills, who at that time was superintendent of the Tassie Belle furnace, pronounced it the finest grade of brown coal he ever saw. This vein is overlaid with several feet of clay, followed by a strata of slate, thus forming an ex-

cellent roof over the coal and making it both easy and safe to mine. Just how far this vein extends is not known, but as a vein of similar thickness and quality has been found in several different parts of the county, for instance, both north and south of here, it is thought to be of great extent. This vein was discovered on the wester slope of what is known locally as the "mountain," which is the dividing ridge between Naches river on the west and Angelina river on the east. It is almost certain, however, that it runs at least through the "mountain," which at this point would give it an extent of approximately two miles and embracing an area of several thousand acres. If this theory be correct, then here is a source of wealth not previously reckoned along with Cherokee county iron-ore deposits. This six-foot vein of coal should yield approximately 10,000 tons of coal per acre. It may be interesting to state that there are brown coal mines in Texas which are now being worked on a royalty of only 5 to 10 cents per ton. On a royalty on only five cents per ton this mine should yield \$500 per acre. But as the net profit on similar coal is known to be from 50 cents to \$1 per ton, then the operators of this mine should realize an almost princely income.

The existence of this coal in large quantities is unquestioned, likewise its value as a fuel for various purposes. But for the use of the ironmonger it has never been put to a careful test in this country, but unquestionably it is all right for most any use except smelting iron ore. But this same kind of coal is known to be the only available fuel in many parts of Europe, and furthermore, it is used there for smelting iron ores. For this last purpose it is either put into the form of briquettes or else is coked. It has been ascertained that Texas brown coal will yield a larger per cent. of heat units than the European brown coal. According to Professor Dumble, samples from six different European mines compared with samples from six Texas mines yield the following comparative quantities of carbon: Europe, minimum, 35 per cent.; maximum, 45 per cent. Texas, minimum, 37 per cent.; maximum, 56 per cent. In coke European coal yields 49.5 per cent., and Texas coal 58 per cent.

Assuming that the foregoing estimates are correct, it is reasonable to anticipate that at some future date, not very remote, our Texas coal will be utilized for every need of our industries. Indeed, the rapid advancement of our industries makes it imperative that we learn the secret of converting these coals into coke, otherwise many of our most important industries must remain undeveloped for years to come. When we remember that our vast iron resources are largely dependent upon our ability to produce coke from our native coals we can understand the importance to all this great Southwest of the solution of that problem. To the men who will take up this problem there are millions in it for them, and the coal barons of the Atlantic seaboard would hardly be "in it" compared with what may be made from this industry.

W. M. C. CLOYD.

In most attractive style the proceedings of the forty-fifth annual convention of the American Institute of Architects, held last winter at Washington, D. C., and of the celebration at the same time of the fiftieth anniversary of the foundation of the organization, have been printed in a brochure of more than 200 pages. Not the least interesting feature of the publication, which itself will interest a wide reading in the country, is the facsimile reproduction in reduced form of greetings and addresses presented to the institute through delegates from many well-known institutions and societies.

Relative Importance of the Southern Iron Industry.

By EDWIN C. ECKEL.

[Written for the Manufacturers' Record.]

The great increase in pig-iron production in the South which has taken place in the last 20 years has caused many to overlook the fact that other sections of the country have shown vastly greater increases during the same period. The net result of these changes is the disappointing fact that the South today produces proportionately to the rest of the country, not much more than half as much iron as in 1851 or 1856. On carrying back the comparison further we find a still more startling result—that during 1905, 1906 and 1907 the South produced relatively less pig-iron than in 1854. For 20 years we have heard of Birmingham as the future rival of Pittsburgh, but if the present tendencies are maintained we will soon begin to question whether it will be able to hold its own as against Buffalo, Pueblo or even Duluth.

In view of our knowledge of Southern wealth in iron ores and fuels, it is evident that the condition above summarized is distinctly worthy of more careful investigation and analysis.

I. The Condition of the Iron Industry

In the following discussion Maryland, West Virginia and Missouri have been intentionally excluded from consideration, as not being properly part of the Southern iron district. The greater part of the pig-iron production of Maryland during the years under review is based upon foreign ores and on export trade. All of the West Virginia iron producers at present are located in the western part of the State, where, using Lake Superior ores, their activity fluctuates with that of the Pittsburgh district rather than of the South. To a lesser extent this is true of Kentucky, but the entire production of this State has been included with the South, and probably fairly balances that small part of Maryland and Missouri production which might have been properly included in the Southern total.

Limited as above noted, the Southern iron-producing States form a fairly distinct commercial unit, though there would be good reasons, based on character of ores and iron and on industrial conditions, for forming two Southern groups, one centering in Virginia and the other in Alabama.

In Table I the statistics used are those published by the American Iron and Steel Association. For all the years except 1880, 1885 and 1890 the quantities are given in long tons; for the years named, in short tons:

TABLE I.—Pig-Iron Production of South by States, 1854-1907.

Year.	Alabama.	Virginia.	Tennessee.	Kentucky.	Georgia.	Texas.	North Carolina.	Southern States.	Total for
1854	1,845	7,810	37,918	35,165	4,211			86,949	
1880	77,190	29,934	70,873	57,708	59,821			265,526	
1885	227,438	163,782	161,199	37,553	36,551			626,523	
1890	914,940	327,912	299,741	53,604	46,733			1,642,930	
1891	795,673	295,292	291,738	44,844	71,737			1,499,284	15.94
1892	915,296	342,847	300,081	56,548	21,471			1,636,243	17.87
1893	726,888	302,556	207,915	47,591	48,775			1,333,935	
1894	552,292	298,086	212,773	33,854	44,939			1,182,044	
1895	554,667	346,589	248,129	62,780	36,039			1,549,204	
1896	522,170	286,277	248,338	70,660	18,965			1,646,410	
1897	947,831	307,610	272,130	35,899	23,267			1,586,737	
1898	1,033,676	283,274	263,439	100,724	18,940			1,700,053	
1899	1,083,905	365,491	346,166	119,019	23,638			1,338,219	
1900	1,184,337	490,617	362,190	71,562	39,134			2,147,840	
1901	1,225,212	448,662	327,139	68,462	29,606			2,109,081	
1902	1,472,211	537,216	392,778	119,725	35,410			2,548,340	
1903	1,561,398	544,034	418,368	102,441	87,255			2,713,496	
1904	1,453,513	310,526	302,096	37,106	75,686			2,178,927	
1905	1,604,062	510,210	372,692	62,735	38,699			2,589,395	
1906	1,674,848	483,525	426,874	98,127	92,599			2,775,973	
1907	861,771	260,912	193,371	79,013	26,173			1,421,240	

*First half of year.

On examination of Table I it will be seen that in 1854 Tennessee and Kentucky were the leading Southern iron producers, followed at a long distance by Georgia, with Alabama an unimportant last. The total output of the South in that year was 86,949 tons. During the 25 years of war and no less destructive "reconstruction" which followed, Southern iron showed lit-

tle change for the better. In the late 70s and early 80s, however, Alabama and Virginia led off in the rapid growth which more than quadrupled the Southern iron output in 10 years. Here, unfortunately, the progress rested, for since 1890 the rate of increase has been very slight.

The relative importance of the Southern iron industry as compared with that of the entire United States is best seen on turning to Table II:

TABLE II.—Proportionate Iron Production of South, 1854-1907.

Year.	Production of United States.	Production of Southern States.	Per cent.
1854	724,833	86,949	11.99
1880	4,295,414	265,526	6.18
1885	4,529,868	626,523	13.83
1890	10,307,028	1,642,930	15.94
1891	8,279,870	1,499,284	18.01
1892	9,157,000	1,636,243	17.87
1893	7,124,502	1,333,935	18.72
1894	6,657,388	1,182,044	17.75
1895	9,446,308	1,549,204	16.40
1896	8,623,127	1,646,410	19.09
1897	9,652,690	1,586,737	16.44
1898	11,773,934	1,700,053	14.44
1899	13,620,703	1,938,219	14.23
1900	13,789,242	2,147,840	15.58
1901	15,878,354	2,109,081	13.28
1902	17,821,307	2,548,340	14.30
1903	18,009,252	2,713,496	15.07
1904	16,497,033	2,178,927	13.21
1905	22,992,380	2,589,395	11.26
1906	25,307,191	2,775,973	10.97
1907	13,478,044	1,421,240	10.54

*First half of year.

While the South produced in 1854 almost exactly 12 per cent. of the American total, in 1880 her production had fallen to barely over 6 per cent. From this year on a relatively rapid increase in Southern output carried the percentage to 18 in 1891, to 18½ in 1893, and finally to a maximum of 19.1 per cent. in 1896. Since 1896, though the Southern output has increased quite regularly, the increase is small compared with that shown by other sections. The result is that the Southern output is steadily becoming of less relative importance, the percentage having steadily fallen off until during the first half of 1907 it was barely over 10½ per cent.—considerably less than in 1854.

The decrease in relative output, though very gradual, has unfortunately been very steady, having encountered no serious reversal of direction since 1896, and no reversal at all since 1902. So far as can be estimated now from the new furnaces known to be in course of construction, there is no probability that the present trend will be changed in the near future. Unless business conditions should change materially, the Southern iron output of 1908 and 1909 will probably not amount to more than 9 per cent. of the total American production. New York, which five years ago produced less than a quarter as

much as Alabama, will probably lead her at the close of 1907.

Whatever we may think of the future of the South, it cannot be gainsaid that the past 10 years have been disappointing in this respect at least, and that the immediate future gives little promise of improvement. The conditions of the case having been stated, some of the causes

which have contributed to this relative retrogression may be considered.

II. The Causes of Southern Retrogression.

The cause to which the relative lack of growth of the Southern iron industry is perhaps most commonly assigned is the great impetus given to the Northern industry by the discovery of the Mesabi range. This undoubtedly contributed to the result by furnishing Pennsylvania, Ohio, Illinois and New York with an enormous tonnage of easily-mined high-grade ores. By increasing the possibilities of the Northern iron trade it diverted from the South capital which otherwise would have been available for Southern furnaces. The increased output of the lake ranges must, therefore, be recognized as an important factor in the result, but it was by no means a decisive factor. Had other conditions been satisfactory, the opening of the Mesabi alone would not have put the South into its present condition.

Three other causes have, in my opinion, exerted sufficient influence to be considered as important factors in the problem. These are (1) the condition of the local market, (2) the labor question, and (3) the policy, as to development, of most Southern iron companies.

A few years ago one of the leading Southern iron companies published figures as to its shipments to various States. From the figures so published the following little table has been prepared as an instructive exhibit. The shipments for the years 1888 and 1899, respectively, have been reduced to percentages of the total output of the company and grouped so as to admit of ready comparison:

Shipments to	Per cent.	
	1888.	1899.
Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, etc.	43.7	50.9
New York, New Jersey, New England	13.6	9.8
Michigan, Wisconsin, Minnesota, etc.	9.7	7.1
Export	0.0	9.8
Total North and foreign	67.0	77.6
Maryland, Kentucky, Virginia, West Virginia, Delaware	9.2	3.1
Missouri, Texas, Arkansas, Louisiana	10.9	9.2
Alabama, Georgia, Tennessee, North Carolina, South Carolina, Florida, Mississippi	12.9	10.1
Total South	33.0	22.4

The figures were originally published by a management proud to exhibit the wide sales territory which their pig entered. It is possible that the statement temporarily cheered up the spirits of the stockholders, who, it need hardly be said, were in sore need of encouragement then and for many years thereafter. For, when the table is examined closely it will be seen that there was no particular reason to be proud of the exhibit. It was rather to be regarded as indicating either a culpably inefficient management or a very unfortunate general condition in the South. Here we have a company making pig at a very satisfactory differential as against the costs of Pittsburg furnaces. As if to destroy this advantage as far as possible, the company shipped over half of its product into what may be regarded as the Pittsburg local markets. Almost exactly three-fourths of its output of pig was sent into districts where it met serious competition, while the home market got only a scant quarter of the total. The railroads, of course, made the profits.

Now, on the surface of things the condition above described was not due directly to incapable management. At that date the Southern market could not absorb the Southern iron companies could hardly be blamed for selling their pig in Northern markets. A more careful examination of the case, however, would hardly result in judgment so favorable to the Southern companies. For the South at that date, though not capable of absorbing 2,000,000 tons of pig-iron annually, was undoubtedly capable

of using the same amount of iron in finished forms. The error lay in not carrying the process further. In these days a company which sells its iron in the form of pig, when it might sell an equivalent amount in the form of steel rails, wire, car wheels or other finished products, is simply restricting its possible profits and growth without obtaining any corresponding advantage. This is still more the case when the bulk of the pig is sold in a competitive market, while the finished products could be sold at home.

Despite the statements of the early "boomers," it is now well known that the South is practically lacking in ores sufficiently low in phosphorus to be used for Bessemer pig. It is true that a few deposits, mainly of magnetic ores, do fall within the Bessemer limit, but they are not sufficient to invalidate the general statement. Twenty years ago such a condition as to ore would have been sufficient to justify exclusion of the South from the possible steel-producing districts. Today, however, with the rapid growth of the basic open-hearth process, the situation is very different, but relatively little advantage has been taken of this change. Of the total Southern pig-iron production of 1906, somewhat over one-fifth was basic pig. Much of this, however, was shipped to steel plants in the North, and it is probably fair to say that about one-eighth of the Southern pig-iron was used in Southern steel plants. The South is still predominantly a producer of foundry irons. A number of the iron companies are now amply able, both as regards raw materials and money, to take up the manufacture of steel and of finished products, but are held back by what may be considered an excess of caution.

One fact remains to be noted—the relative stability of the Southern iron trade. In times of general business depression Southern furnaces are able to keep in operation longer than those elsewhere, and to operate at a profit when other plants are showing losses. It is in times of national depression that the Southern iron trade makes the best relative showing. When the crisis is passed, however, and general prosperity is at hand, little or no attempt has been made to provide for increased output in the South. A "boom" period in the iron trade usually finds the South with furnaces ready to shut down for repairs, with ore mines entirely lacking in possibilities of rapid development, and with labor scarce and expensive. The result is that during such periods of great activity elsewhere the South shows little increase in iron production. When the trade falls off, however, and Northern furnaces are shut down as unprofitable, Alabama and Virginia can still keep their stacks in operation without loss.

A summary of the matter might be that three conditions must be observed before we can hope for any great increase in the Southern iron industry relative to the remainder of the American trade:

(1) The labor supply must be increased and its quality improved. It would be better to have the entire Birmingham district unionized, provided that would secure an adequate supply of labor, than to attempt to keep on with the miserably inadequate supply now at hand.

(2) Development work in the mines should be carried on during periods of depression, so that the mines can respond quickly to any suddenly-increased demands.

(3) The output of steelmaking irons should be increased, and provision should be made not only for their conversion into steel, but for their local manufacture into finished products.

Progress is now being made along all three of these lines. Within two years it

is probable that the steelmaking capacity of the South will be more than doubled. Several companies are making intelligently-directed attempts to develop their large ore reserves that they will be able to readily meet the demands of the furnaces in times of extra pressure. The

labor question, though still not by any means in a satisfactory condition, has been taken up during the past year or so with particular care, and there are reasons to hope that the next boom in iron will find Birmingham at least with a fairly good labor supply.

Transportation Exhibits at the Jamestown Exposition

[Special Correspondence Manufacturers' Record.]

Jamestown Exposition,

Norfolk, Va., August 19.

Much interest attaches to exhibits from time to time of the improvements and advances that are constantly being made to better the equipment necessary not only to facilitate the handling of the rapidly-growing amount of freight, but for the comfort of the traveling public as well. The exhibits in every class of transportation are broad and well handled at the Jamestown Exposition, and the interest of the public generally in this important question can be well gauged by the numbers who are inspecting and asking all sorts of questions concerning the equipment shown by many of the leading manufacturers and operators in this field. There may be said to be four distinct classes who show great interest in these exhibits, one being those having to do with the construction of the equipment, another with the operation, another with the shipment of freight, and finally the traveler, who is usually impressed with that part of the equipment which makes the wheels go around and would like to inspect it closer, but is generally unable to do so. The first and second classes will find here much that will be of value to them, for the exhibits include the very latest ideas of the big locomotive companies, the builders of passenger and freight cars and the solving of intricate engineering problems in modern railroad construction, the improvements being made in marine transportation as well as those in electric cars and automobiles. The third class finds interest in the exhibits in the fact that they can see for themselves the great amount of exhaustive study that is being given to the shipment of freight, while the fourth class, even if only for the gratification of curiosity, will be allowed to inspect at first hand and have explained to them every part and operation of the locomotive and cars, electric cars, steamships, motor boats and automobiles.

Perhaps the most interesting and instructive exhibit of modern improvements in railroad transportation, and one that appeals strongly not only to the technical and practical railroad man, but also to the layman, is that of the Pennsylvania Railroad Co. It is confined entirely to a demonstration of the manner in which the extension of the company's lines is being made into New York and Long Island through tunnels under the Hudson or North and East rivers. Briefly speaking, the project includes the construction of a viaduct and earth embankment across Hackensack Meadows from Harrison, N. J., then under Bergen Hill through solid rock tunnels, under North river in steel shield-driven tubes, under the city of New York in rock and earth tunnels, then eastward under the East river in more steel shield-driven tubes, emerging on Long Island to connections with the outside lines. Just how these many difficult engineering problems are being overcome and how all sections of the tunnels are being constructed are shown here in a space occupying 1900 square feet. The exhibit contains a full-size section of the 23-foot steel tubes which pass under the rivers; a topographical model showing by a white line on its face the lines of the tunnels from the portals in New Jersey to the

portals on Long Island; a longitudinal sectional model, illustrating the construction of the shield-driven tunnels; a model of the twin tunnels under Bergen Hill; a large map of the terminal passenger yard; a water color showing a bird's-eye view of New York city looking uptown from the company's station, and architects' colored drawings of general views of the new station; a series of photographs showing views of the different stages of the progress of the work and the electrical equipment of the Long Island Railroad. The tunnel section is shown exactly as it is being constructed 70 feet below the top surface of the river, and consists of three complete rings of cast metal in which concrete has been so placed as to enclose snugly the outline of a train with footpaths on either side, the conduits in the body of the concrete to carry electric, telephone, telegraph and other cables, and rail sections showing the track structure and third-rail system, with its protection. The rails are fastened by means of heavy tie plates laid on felt and held in place by screw spikes, this being a new feature in track construction. The topographical model gives a very clear idea of the whole general scheme of improvement, while the longitudinal sectional model shows just how the shield-driven tubes are being constructed under the river and the successful manner in which this, the most difficult engineering feature of the whole undertaking, has been worked out; in fact, so complete is the exhibit in every way that everyone visiting it will be deeply impressed not only with the great strides that have been made in the engineering profession, but also with the wonderful progress that has been made in railroad transportation. These vast improvements are to cost upward of \$90,000,000, and this is the first time that the methods of construction have been publicly exhibited.

In order to throw additional safeguards around those traveling on its system, the Pennsylvania Railroad is having a number of all-steel passenger cars constructed by the Pullman Company, which has on exhibition the type of absolutely fireproof sleeping car which will be operated in connection with the new tunnel system. This car is constructed of steel, brass and aluminum, with all upholstery work chemically treated, so that it will not burn, and has not a particle of wood in any part of its construction.

Modern improvements in railroad transportation are also well shown here in the exhibits of two of the big locomotive manufacturers—the American Locomotive Co. and the Baldwin Locomotive Works—both of whom show locomotives having in them the very latest ideas in design and construction. Each company has its own plot of ground, located on the southeastern border of Lee's Parade, just off the main entrance to the exposition.

That of the American Locomotive Co. covers a site 150x250 feet. In the center of this plot is located the main building, two stories in height, and flanked on either side with long open sheds, in which several modern-type locomotives are exhibited. Surrounding the exhibit are spacious grass lawns, interspersed here and there with various kinds of trees, flowers and shrubbery, the whole giving a particularly beau-

tiful effect. The office is located on the ground floor of the main building, and around it numerous photographs of locomotives built for different roads have been effectively hung. The locomotives exhibited consist of a consolidation-type freight engine built for the Chesapeake & Ohio Railroad, having a total weight on driving wheels of 177,700 pounds and a total weight of engine and tender of 332,060 pounds, and one for the Southern Railway having a weight on drivers of 180,600 pounds and a total weight of engine and tender in working order of 344,400 pounds, this also being of the consolidation-type freight locomotive. Both of these are equipped with the Walschaert valve gear. A dinky of the four-wheel connected-saddle type is also shown, this having a weight on drivers of 36,000 pounds, making it a very practical engine for the use of contractors, logging roads, industrial plants and for all purposes where sharp curves, light rails and uneven roadbeds are encountered. In addition to these locomotives, there is exhibited the latest design of an Atlantic steam shovel built for the Atlantic Equipment Co. of New York. This shovel shows a number of radical departures from the older methods of construction. The hoisting is done by direct wire rope with but one sheave, instead of chain with from five to seven sheaves. The hoisting machinery is mounted directly upon the boom, so that no guide sheaves are necessary, and the power is applied in the most direct and simple manner and with the least possible loss. The main engines are of the locomotive type with outside cylinders, these having a solid cast-steel frame for both engines in one piece and steel crossheads, and with all parts easy of access. The shovel is demonstrated in connection with a patent dump car made by the Oliver Manufacturing Co. of Knoxville, Tenn., the car being elevated on a trestle, representing a bank, and giving a very good idea of the lift of the bucket, which is 16 feet 2½ inches.

16 feet 2½ inches.

A short distance away is the exhibit of the Baldwin Locomotive Works. This consists of a two-story building with wings extending on an angle to either side. The building has a stucco exterior with a tile roof, and is of the Spanish mission type of architecture, and it, too, is surrounded with grass lawns on which numerous flowers have been prettily arranged. This exhibit shows six types of the latest improved locomotives, and includes a balanced compound prairie-type locomotive built for the Atchison, Topeka & Santa Fe Railway and representing the latest development in this class of engine. It has a weight on driving wheels of 174,700 pounds and a total weight of engine and tender of 418,000 pounds; a 10-wheel locomotive for the Atlantic Coast Line, having a weight on driving wheels of 113,700 pounds and a total weight of engine and tender of 270,000 pounds; a Mallet compound locomotive for the Northern Pacific Railway, having a weight on driving wheels of 316,000 pounds and a total weight of engine and tender of 503,000 pounds; a Pacific-type locomotive for the Southern Railway, having a weight on driving wheels of 138,640 pounds and a total weight of engine and tender of 358,000 pounds; a consolidation-type locomotive with smokebox superheater, having a weight on driving wheels of 232,700 pounds and a total weight of engine and tender of 422,000 pounds, and a Baldwin-Westinghouse electric locomotive built for the New York, New Haven & Hartford Railroad Co., having a total weight of 156,000 pounds. Inside of the building are shown a Baldwin-Westinghouse electric locomotive built for the Pocahontas Colleries Co., having a total weight of 12,000 pounds, and one for mine service

having a weight of 8000 pounds. Also exhibited here are trucks, both for motors and trailers, to meet the requirements of modern electric railway systems. In one of the wings of the building is shown the exhibit of the Standard Steel Works, an associate company. Here are displayed the products which are manufactured for use on locomotives and electric cars, and consisting of steel tires, steel-tired wheels, rolled-steel wheels, mounted wheels, forged-steel rings and pipe flanges, steel and iron forgings and castings and oil-tempered steel springs of all kinds. The company has gotten out an attractive illustrated pamphlet, which describes in detail each of the exhibits and gives an interesting history of the company, which has been in continuous operation under the founder, Matthias W. Baldwin, and his successors for 75 years.

In the Machinery Building the Climax Manufacturing Co. of Corry, Pa., is exhibiting an industrial geared locomotive, and Joseph E. Bowen of Norfolk, Va., another type of industrial locomotive, both of which are for the use of contractors and plant service. Here, too, the Cambria Steel Co. of Johnstown, Pa., is showing three all-steel freight cars, including one flat car, one gondola and one large 100,000-pound capacity hopper, while a large and comprehensive exhibit showing the latest improvements in electric-car construction is made by the J. G. Brill Company of Philadelphia, Pa. This includes a full-sized section of an all-convertible car, for use both in summer and winter; a semi-convertible car complete in every detail, various kinds of improved seats, a new gong apparatus, a sandbox with several new features and an improved track scraper having a removable shoe attachment. There is also shown a complete high-speed truck for interurban purposes, being the latest improved model in this line; a single truck, complete, having a diagonal cross bracing at the center of the frame to hold it rigid; complete truck with semi-elliptical springs in place of equalizing bars for use under narrow and low cars for city and interurban purposes. In the center of the exhibit is a prettily-designed booth used as an office and a resting-place for sightseers.

The most unique display in the electric transportation field is the exhibit of the American Monorail Co. of Baltimore, Md., which is operating one of its cars on a quarter-mile stretch of track extending from the Warpath to the United States military camp. As indicated in its name, the car is run on a single line of rail, and the dominating principles of the system used are found in the simple facts that the weight of the car and its load are transmitted to a single rail through the car wheels in tandem, and the horizontal forces, due to unequal loading, side winds, centrifugal force, etc., are transmitted through overhead trucks to two guide rails, thence through bents to the ground. These overhead trucks are placed in a horizontal position, and their deeply-grooved wheels fit between the guide rails, thus securely fastening the car above the top, while the carrying wheels have two flanged tires, insuring a substantial grip at the bottom. That the system is thoroughly practical is demonstrated by the many who ride on it daily, and by the further fact that a number of New York capitalists are financing a line to be built in New Jersey. This system, which from present demonstrations bids fair to become an important factor in the transportation world, is the invention of Howard H. Tunis, a Baltimorean, who is also general manager of the company.

The rapid advance in the practicability of the automobile has caused it now to become an important factor in the transpor-

tation field today, and many improvements and new features are shown in those exhibited in several of the buildings, and among them may be mentioned the Rapid Motor Vehicle Co. of Pontiac, Mich., showing two styles of sightseeing machines; Reo Motor Car Co. of Lansing, Mich., one of the machines which made a clean score in the Glidden tour and from New York to the exposition; Hamilton Automobile Co., showing a Stoddard-Dayton runabout and touring car; Carter Motor Car Corporation of Washington, D. C., its two-engine automobiles; International Harvester Co. of Chicago, Ill., an entirely new style of automobile built much along the lines of a two-seated carriage and intended mainly for country use, and a gasoline touring car showing the latest improvements as made by the Studebaker Brothers Manufacturing Co., South Bend, Ind.

Neither are the exhibits here confined to the improvement of equipment for transportation by land, for there is a building which has been devoted exclusively to marine exhibits and appliances of all kinds for vessels of all kinds. The largest and most interesting exhibit in this class is that of the Newport News Shipbuilding & Drydock Co. of Newport News, Va. It occupies the center of the building, and consists of a fully-equipped deckhouse of a modern merchant ship. Everything found in a real ship of this class is shown in its proper place, including saloon and freightroom, smokestack, foremast with its rope ladders, forward lifeboats, pilot-house with a full equipment of compasses, mechanical telegraph, steering wheel, telephones, etc., and searchlight and side lights. Many visitors take this advantage to inspect to their heart's content this, the most interesting feature of a steamship's equipment. Here, too,

will be found a collective exhibit of the various water transportation lines which operate between Tidewater Virginia and other points. The companies exhibited are the Baltimore Steam Packet Co. and the Chesapeake Steamship Co., running from Baltimore; Norfolk & Washington Steamboat Co., from Washington, D. C.; Old Dominion Line, from New York; Virginia Navigation Co., from nearby points, and the N. Y., P. & N. R. R., from Cape Charles City. The leading steamers of the different lines are shown in oil paintings effectively hung around the walls and placed on easels, while a large table in the center of the booth contains pamphlets giving full information concerning sailings, routes covered, rates, etc.

The transatlantic service is represented here by the International Mercantile Marine Co., which controls several lines operating between this country and many foreign ports, and its American Line is represented by a good-sized model, complete in every detail, of the steamships St. Louis and St. Paul, and its Red Star Line by one of equal size of the steamships Kroonland and Finland, while a number of its other important steamships are shown in oil and water-color paintings. In an adjoining booth a model of the steamship Re Vittorio is shown by the Italian Royal Mail Steamship Co., and on the walls surrounding the exhibit are hung paintings of its other principal vessels.

Other interesting things to be seen in the Marine Exhibits Building include motor boats of several kinds, marine engines of numerous makes, full lines of yacht and motor-boat supplies and equipment, fireworks for signaling, diving apparatus and numerous other articles necessary to the operation of vessels of every character.

WILLIAM H. STONE.

A Center of West Virginia Coal Development.

[Special Correspondence Manufacturers' Record.]

Welch, W. Va., August 9.

McDowell county is the storm center of the coal development of West Virginia, being illustrative alike of the tremendous productive power of this greatest of coal States and of the unrivaled rapidity with which it has sprung into prominence. In the last 18 years, during which the production of coal in West Virginia has increased just about 900 per cent.—from 4,663,857 in 1889 to more than forty million tons in 1907—McDowell county jumped from sixth place, with 245,700 tons, to first place, with 7,806,524 tons. In 1888 McDowell county had not produced a ton of commercial coal. A tour of inspection through this county now presents to the observant tourist such scenes of enterprise and activity, such evidences of progress and development as to almost overwhelm his powers of assimilation and paralyze his ability to digest and describe. Possibly no other section of the country—certainly none outside the gold fields—has showed such remarkable strides in the path of progress in the past decade as has McDowell county, from the county seat of which this letter is being written.

The Government census of 1900 gave McDowell county a population of 18,747; today there is a population living within its borders of close to 75,000. Wilder, rougher country it would be hard to find, yet the entire stretch of the Norfolk & Western Railroad through the county is a veritable hive of industry. The narrow valleys of the Elkhorn and Tug, and the gorges through the mountains cut by their various tributaries, are the scenes of a continual industrial activity almost unrivaled, certainly unsurpassed. So many are the coal plants, and so close together along the railroad, that

the traveler as he passes through is unable to discern where one coal town ends and another begins, and if he rides on a local train the stops are so many that he feels that he is making no progress.

Nor is the carrying of passengers and freight the only work in which the railroad itself is engaged. With the intention to put its road in the best possible condition to handle the immense traffic now offered and continually and persistently increasing, the Norfolk & Western Company is digging tunnels, straightening track, improving grades, laying steel, putting in sidings, and in every way improving its line and adding to its ability to furnish transportation for everything offered. The policy of this road is a broad and liberal one, and the consequence is that the mines along its line are furnished facilities for shipping coal more nearly equal to their possible output than those of any other general section of the State.

The coal mined in this county is for the most part from the famous Pocahontas seam No. 3, which, while not as thick here as further to the southeast, where it reaches 13 feet in clean coal, is still of good workable size, and of the same unsurpassed quality that has made it famous throughout the world. The No. 3 seam dips under the water level near this place, and the operations west of here are working in the upper measures.

There are more than sixty operations in this county, and the number is being continually increased. The largest number of operations belonging to a single company are those of the United States Coal & Coke Co., a branch of the United States Steel Corporation. This company has headquarters at Gary, a town of its own building, which lies southwest of this

place about seven miles. The company now has eight operations within a few miles of Gary, with 16 different mines. It is increasing the number of operations, and will soon have 30 mines running.

Most persons, unaccustomed to thinking in millions of tons, will find it somewhat difficult to grasp the amount of coal mentioned as being mined in McDowell in a year's time. For the better understanding let us reduce it to days. The total number of tons mined, adding the 7,806,524 shipped and the 2,656,050 made into coke, is 10,462,580. For 312 working days this means 33,540 tons daily. To move this amount of coal requires 670 50-ton cars each day. It takes more than four miles of loaded 50-ton cars out and more than four miles of empties in each day to carry this output.

But it is in the matter of coke production that McDowell county is destined to stand pre-eminent among West Virginia counties. The coke business, largely dependent upon the iron and steel industry, must, in the nature of things, increase largely in importance with the increase in the production of those articles. The growth of the iron and steel business in this country in the last few years has been phenomenal, even for a country of remarkable growth in all lines of human endeavor, and it is felt by those who study such questions that the industry is hardly more than in its infancy. Sir Lowthian Bell, the great English ironmaker, said of the importance of the ironmaking industry in America:

"With the exception of air and water it is open to the question whether there is any form of matter which the human race could less easily spare than iron. Short of going the length of asserting that without this metal for an anchor, or steel for a compass, the adventurous navigator could never have crossed the Atlantic, we may credit the locomotive, the steamer and hence the iron for the sequence of events which has peopled North America with the Anglo-Saxon race. The result has been to raise a vast territory to a position without parallel in the progress of the world."

Charcoal was the fuel first used in the making of iron in this country, and it held its place of supremacy until 1855. In that year it was overtaken by anthracite coal, and never again challenged for first place. Twenty years later coke went to the front, and has since been the fuel for the iron furnaces. The first coke was shipped from McDowell county in 1889, but the record of the annual output is not now available beyond 1907. From that time on it is shown by the following table:

Year.	Tons of 2000 lbs.
1897	567,070
1898	731,681
1899	923,166
1900	1,070,033
1901	953,702
1902	929,433
1903	1,016,988
1904	1,170,200
1905	1,380,805
1906	1,699,426

The coal mined here is made into coke with great profit because of its high percentage in fixed carbon and the correspondingly low percentage in volatile matter, sulphur and phosphorus. The analysis made for the British Government by John Pattison, F. I. C., F. C. S., showed the following:

Carbon.....	86.51
Hydrogen.....	4.44
Oxygen.....	4.95
Nitrogen.....	0.66
Sulphur.....	0.61
Ash.....	1.54
Water.....	1.29
Total.....	100.00

From this it will be plainly seen that the process of making coke, which is merely the application of sufficient heat to release the volatile matter, is a very simple and easy one; much easier than that necessary in the reduction of coal in which the volatile matter runs up to 40

per cent. or more. Of the coke itself the claim is made that it is without a rival in the making of steel by the Bessemer process and for general furnace purposes. Following is the analysis of the coke:

Water.....	.347
Volatile matter.....	.767
Fixed carbon.....	92.552
Ash.....	5.743
Sulphur.....	.597
Phosphorus.....	.007
Total.....	100.00

For the year past the number of coke ovens employed in McDowell county was 9592, and they were in use an average of 298 days each. This number has been increased during the past few months, and the tonnage of the product will show an increase the present year, for while the coke business is falling away in other portions of the State the demand is such that it is increasing here, and this county's lead will be increased as the years go on.

The labor employed in McDowell is largely colored, and the negro citizen outnumbers the white by a large majority. The office employees, clerks in the stores and those engaged in such like other capacities are white, of course, and are drawn for the most part from Virginia and other Southern States.

GEORGE BYRNE.

CHENOA COAL FIELDS.

A Striking Illustration of Southeastern Kentucky Progress.

[Special Cor. Manufacturers' Record.]

Middlesboro, Ky., August 17.

Many years ago several men of marked ability, perceiving the advantages to be derived from the coal deposits in the Big Clear Creek country of Southeastern Kentucky, organized a coal company and constructed 13 miles of broad-gauge track of the Cumberland River & Tennessee Railroad to reach the field. It opened its mine in a vein of cannel coal, built up a small town for its employes, a large commissary, side tracks, tipplers, chutes and all the necessary equipment for a prosperous mine. The failure of this company was total, absolute, woeful—railroad, mine, equipment, even the land—everything was lost in the final disaster. For years the steel tracks rusted as the ties rotted. Expensive trestles became unsafe, stone culverts wasted away, the tenant-houses lost paint, windows, doors and porches fell; effects of time and weather were visible everywhere. A mountain woman rented the commissary and kept a handful of goods for the benefit of her kind.

Such were conditions on Big Clear creek in the beginning of 1906. Failure was written on the face of nature in one of the most beautiful and most wealthy sections of the country. The first company, the pioneer, had made one error. The time had not come for this section's wealth to be given to humanity. Plans were right, the coal was there, the capital was available, but—the time was not ripe. In 1906 the operation of the Excelsior Coal Co. at Middlesboro was on its last legs. The end was in sight. These people, looking for another place to invest their money, found a tract of coal land on Big Clear creek that had lain unnoticed for years. They secured a lease of 800 acres and proceeded to develop it. Mr. Burke H. Keeney was the first general manager, but to his successor, Mr. Clyde Miller, belongs the credit of being the first man to install a successful operation on Big Clear creek—the Chenow Coal Co. In rapid succession followed the Caney Creek Coal Co., the Clear Creek Coal & Coke Co., the Poplar-Lignite Coal & Coke Co. and two operations of Kelly & Irvine—six plants in all, among the greatest in Kentucky as to size of leases, quality of coal and expenditure of money in beginning shipments.

The Louisville & Nashville road has expended time and money in construction to

reach these operations, which have leases covering from 600 to 1200 acres in area underlaid by three or four workable veins of fine domestic, steam and gas coals. The Chenoa Coal Co., with headquarters at Middlesboro, has put in a \$30,000 plant, up to date in every feature, and is operating an 800-acre lease in the Mason seam. The Caney Creek Coal Co., with offices at Chenoa, Ky., operates the Poplar Lick vein, which analyzes as follows:

Volatile combustible matter...	33.74 per cent.
Fixed carbon.....	60.12 "
Sulphur.....	.25 "
Ash.....	1.43 "
Molsture.....	4.46 "

The officers of the company are Messrs. W. D. Reynolds, president; Thomas J. Davis, vice-president and consulting manager; D. Reynolds Morgan, secretary, and M. L. Beddow, general manager.

Above the Caney Creek Coal Co. is the operation of the Poplar-Lignite Coal & Coke Co. This company, which has one of the best operations in this end of Kentucky, is composed of Pennsylvanians and is under the active management of Mr. D. W. Evans. Next above is the plant of the Clear Creek Coal & Coke Co., Mr. J. L. Mannering, president, and Mr. P. T. Colligan, general manager of the Mannering Coal Exchange of Middlesboro, has the same position with the Clear Creek Coal & Coke Co. This company has a lease of 700 acres on the Poplar Lick vein. The two leases above this plant, aggregating more than 1200 acres, were taken by Kelly & Irvine, prominent coal operators and business men of Big Stone Gap, Va. Mr. A. C. Carr of Middlesboro, formerly roadmaster and superintendent of the Cumberland Valley division of the Louisville & Nashville Railroad, has associated himself with Messrs. Kelly and Irvine and will be actively connected with the administration of the two plants, which will be installed at once.

All the houses, which have stood vacant for years, have been repaired, and the old commissary, abandoned by its former owners, has been made over and its stock of goods has been increased twenty-fold. Wagon roads have been constructed, railroads, tramways and inclines have been built. On August 5 the Louisville & Nashville Railroad will institute a passenger service between Middlesboro and Chenoa.

JOHN HOWARD.

A CENTER OF LUMBERING.

ENORMOUS ANNUAL OUTPUT NEAR RICHWOOD, W. Va.

[Special Cor. Manufacturers' Record.]
Richwood, W. Va., August 17.

For its age it is the largest and for its size Richwood is the busiest of West Virginia cities. Eight years ago the site of the town was a back-country farm. Now there are here at least 3500 people, with graded public schools employing 18 teachers, 5 churches, 2 banks, 35 stores, 2 excellent hotels and a number of others of smaller size and cheaper accommodation, a theater, a hospital and more than the usual number of restaurants and small business establishments found in ordinary towns of like size.

In 1901 the Cherry River Boom & Lumber Co. erected a big mill here and began to take the timber from a tract of 75,000 acres it had purchased from various parties. Later the company took over mill property and timber lands from the Baltimore & Ohio Railroad, and now it has a mill at Camden-on-Gauley, some 25 miles west of here, and one at Holcomb, between here and Camden-on-Gauley, while its holdings of timber lands now amount to 150,000 acres. At these three mills and from this great body of land the company is now taking and cutting a daily average of 450,000 feet of lumber. Of this, 300,000 feet is cut here, 100,000 feet at Cam-

den-on-Gauley and 50,000 at Holcomb. There are employed on the mill here about 300 men, while the woods force, which does the timbering for all the mills, but is directed from here, reaches 1200 men. The Camden-on-Gauley mill works 100 men and the Holcomb mill 50. So that the Cherry River Boom & Lumber Co. employs in this neighborhood full 1650 men. The land now being cut over is timbered heavily with spruce and hemlock, and yields an average of 15,000 feet to the acre. This is a big yield, yet even at that 30 acres must be stripped each working day to furnish food for the teeth of the great saws that reduce it to merchantable lumber.

Between this place and Camden-on-Gauley, at Curtin, the Pardee & Curtin Lumber Co. has two mills which cut a daily average of 150,000 feet. The force of men employed on the mills and in the woods reaches 400.

At Allingdale the Roane Lumber Co. has a big mill, and has cut a great deal of lumber. Recently the company has purchased more land, and has now enough timber to employ its mill for several years.

At Fenwick the Fenwick Lumber Co. and the Laurel Manufacturing Co., the latter being the sawmill company and the former the lumber purchasing company, have a mill that is cutting about 100,000 feet a day.

At Tioga, which is on the waters of Birch river, about six miles from the Baltimore & Ohio Railroad at Allingdale, the Tioga Lumber Co. is operating a big mill and sawing 100,000 feet of lumber daily.

So that within 25 miles of this place the mills are cutting at least 750,000 feet of lumber daily, or 225,000,000 a year. If all the land being denuded of forest averaged 15,000 feet to the acre it would take 50 acres a day, or 15,000 acres a year, to feed these mills. But 15,000 feet is too big an average, and so the number of acres reaches nearer to 20,000. The Cherry River Boom & Lumber Co. has sufficient land to keep its saws cutting for 15 years. The company is backed by Scranton (Pa.) capital, and has its principal offices in that city.

Next to the Cherry River Boom & Lumber Co. the most important concern here is the Cherry River Tanning Co. This is a Boston concern, its chief office being in the Massachusetts capital. It employs here from 300 to 400 men and turns out daily 900 sides of sole leather, which is its only product. Hemlock bark is the kind principally used. The hides all come from South America.

The Cherry River Pulp & Paper Co. is another important concern. It was established some four years ago, and has been turning out 50 tons of paper daily until a short time ago, when its output was increased to 75 tons daily. The product is heavy wrapping paper.

The Dodge Clothespin Co. has a factory here and one at Lincoln, N. H., its chief office being in Coudersport, Pa. This company makes at its two mills half the clothespins used in the world. It employs here about 75 people, more than half being women, who are engaged in packing the output. It is reported here that the plant at Lincoln is to be closed down and the output here increased to double what it is now, in which case this town will enjoy the distinction of furnishing the world with more than half its clothespins. Half a carload of these very necessary articles of domestic economy are now manufactured here daily.

The Sherwood Manufacturing Co. has here a hub factory which turns out hubs of five different sizes. The best of wood for the making of hubs, both for buggies and heavy wagons, abounds in this section, and the company finds a ready sale for its

entire output. Employment is given to 50 men.

It may be easily seen that a town of such size with the large payroll enjoyed here must be a very thriving one, and so Richwood is. Money is plentiful and prosperity diffused generally among the people. The stores do a big business, and everybody seems busy and contented. It is asserted by the people here, and the assertion is borne out by the word of a good many traveling men, that one store here, that of the Richwood Store Co., does more business in dollars and cents than any other retail store in West Virginia.

One thing about Richwood that gives it a hopeful outlook for the future is that when the great forests shall have been felled and the timber shipped into the world's markets there will be ushered in the era of coal. For the famous New River coal is found here in a high state of perfection, and the woodsman can change his occupation to that of coal digger and keep right on at work, possibly for the same company. The Baltimore & Ohio Railroad does not now haul coal from this section to market, but after the timber is gone the chances are it will prove one of the important coal fields of the State. Already coal is mined by the Cherry River Boom & Lumber Co. for use in the fireboxes of the locomotives that pull its logging trains, and small mines near here are engaged in supplying the local demand.

Nor has the domestic side of life been neglected here, busy as the people have been in making money. The town is situated on the banks of Cherry river, one of the most beautiful and picturesque streams of West Virginia, long famed for its excellent trout fishing. The location is beautiful beyond description, and in summer the climate is delightful, the altitude being 2300 feet above sea-level. A few miles away the highest peak in West Virginia rises to an altitude of 4500 feet. Pleasant homes, with all modern conveniences, abound, and the citizenship is such that those of tenderest nurturing enjoy here the most congenial society.

From every standpoint Richwood presents a most inviting and alluring prospect, and none more than that found in the genuine open-handed hospitality of its people.

GEORGE BYRNE.

WINSTON-SALEM PROGRESS.

ADDITIONS TO ITS POWER CONSTANTLY MADE.

[Special Cor. Manufacturers' Record.]
Winston-Salem, N. C., August 15.

The development of this section, quickened and stimulated by the progress and prosperity of Winston-Salem, has really only just begun, and new capital is being steadily drawn by its natural resources.

The building of the new Elkin & Alleghany Railroad, which will eventually extend from Sparta, west of the Blue Ridge, to Winston-Salem, will mean much to a large section, making it directly accessible to the markets of this city. Alleghany county, which will have about 15 miles of the new line, upon which the preliminary work is now being pushed, a few days ago voted \$40,000 in bonds to be used in the construction of the line. The thriving little town of Elkin and other townships will also vote bonds, the sentiment in their favor being practically unanimous. Much of the work will be done by State convicts, the State taking stock for the work.

A comparatively new industry in this section is that of canning vegetables. A canning factory was built at Kernersville, this county, a few weeks ago and seed for late tomatoes freely distributed among the farmers in the vicinity of the town. The factory is just now starting up, and it is expected that 50,000 cans will be put up

during the season. Mt. Airy, about 40 miles north of this city, also has a new canning factory, the output of which will be practically the same as the one at Kernersville.

In the city of Winston-Salem the indications of progress are even more marked. The new assessment of property, just finished, shows an increase of more than 25 per cent. since the last assessment two years ago. The valuation now is \$10,331,322, the increase being \$2,774,989. This large increase is accounted for in a degree by a slight extension of the city limits, but is due in a larger measure to the erection of new manufacturing enterprises.

These enterprises represent an investment of approximately \$1,250,000 in the city of Winston-Salem during the last few months, some of the enterprises having been born that early and some of them not yet being quite finished. When these facts are considered, together with the statement that probably 75 per cent. of the amount named is from home capitalists, the growth of the city may well be marveled at.

What promises to be not a small factor in the progress of the Twin City is the assured permanent improvement in its street, water-works and sewer systems. A bond issue of \$150,000 has just been voted for this purpose. Of this amount, \$85,000 is set aside for streets. The owners of property on either side of streets to be improved each pay one-fifth the cost of the street, so it will be seen that a much larger amount will really be spent for street improvement. At the present time a bond issue for \$300,000 for road improvements is being agitated for Forsyth county, and the issue will probably be carried.

Negro in Economics.

The MANUFACTURERS' RECORD has received from Mr. Alfred Holt Stone of Dunleith, Miss., but temporarily at 124 3d street N. E., Washington, D. C., the following:

"I have undertaken the preparation of an economic history of the negro, and am asking the aid of Southern papers in the preliminary work of locating and securing original matter.

"The plan of the work necessarily involves a consideration of the life of the Southern white people. I want such information as is to be found in plantation books and records of all descriptions—records of factors and merchants, family records, diaries, etc.—in fact, anything of an authentic character throwing light on antebellum, reconstruction or more recent economic conditions in the South.

"I am anxious to locate such material and to correspond with persons having it in custody, and with those whose personal knowledge would assist in its interpretation. The South is full of such material, and I shall be grateful to you and such papers as may assist me in locating its present whereabouts and ownership by producing this letter.

"I may add that I am a Southerner, and that my interest is genuine."

Mr. Stone has long been a student of the negro from the economic standpoint, and the work which he has now undertaken is likely to be quite a valuable addition to the economic and sociologic literature of the country.

The First National Bank of Hendersonville, N. C., capital \$30,000, has been organized with K. G. Morris as cashier. This is a conversion of the Commercial Bank.

If you wish to keep posted on the progress of the South, read the MANUFACTURERS' RECORD. Price \$4 a year, or six months for \$2.

CURRENT EVENTS AS VIEWED BY OTHERS

LAGGING OF THE SOUTH IN IRON.

[*Iron Trade Review.*]

While iron production in the South has been growing, it has not kept pace with the growth in production by the country at large. The State of Alabama made but 6.4 per cent. of the total production of the United States in the first half of this year, although no special conditions intervened, while in 1890 it contributed 8.9 per cent. of the total production. The five States, Virginia, Georgia, Tennessee, Alabama and Texas, in 1890 made 15.4 per cent. of the country's pig-iron, while in the first half of this year they made barely 10 per cent. It is true the production of these States has increased, having, indeed, almost doubled in the 17 years, but the production of the country at large has tripled. A part of this setback has been due to the decrease in charcoal pig-iron production in the South, as in 1890 the five States named put almost 12 per cent. of their output into charcoal iron, while this year the proportion was less than 2 per cent.

The record of the past 15 years does not carry out the glowing predictions which Southerners made for the South prior to the slump of 1893. According to the opinions then held, the South, and Alabama in particular, had natural resources sufficient to give control of the iron industry of the United States at least, if not of the world. The fault lies much less with the natural resources than with the way in which they have been developed. It has been difficult to secure money for the South, and the money which has been secured has not always been wisely spent. Too much dependence has been placed upon the natural resources and not enough upon the work of man.

The South's prospects are really better now than they have been at any time in the past. The rapid development of the Lake Superior region has given the South a setback relatively, but not absolutely. This very rapidity has given the industry using Lake Superior ores a handicap, by which the South must eventually profit. The best of the Lake Superior ores, upon which the region's reputation was based, have been exhausted, and owing to this and to the necessity of largely increasing the output year by year, the average iron content of the ores shipped has been continually reduced. At the same time a measurable value has been placed upon the ores in the ground, and the cost of transport has been increased rather than decreased. When the South was making its big promises, 15 years ago, it was contending against Lake Superior ores, which ran well above 60 per cent. iron content in the natural state. Now the average is much nearer 50 than 60 per cent., and ores which run well under 50 per cent. have a commercial value sufficient to pay cost of mining and transport.

The difference in iron content between Southern and Lake Superior ores is vastly less now than it was, and is not sufficient to weigh against the other handicaps which Lake Superior ores are under. Under the leadership of the United States Steel Corporation a valuation of about \$1 a ton is placed upon Lake Superior ore in the ground, and sellers of ore at prices ruling now and lately have been obtaining much more than this. The average freight cost of all Lake Superior ores from the mines to the furnaces is fully \$2.50 per ton, and the coke pays an average of fully \$1 a ton, so that altogether, counting two tons of ore and one ton of coke to a ton of pig-

iron, the value of Lake Superior ore in the ground, the cost of transport and the cost of coke amounts to fully \$8 per ton of pig-iron. The difference between the actual worth of the ore North and South and the cost of assembling in the South is but a small fraction, relatively, of this \$8 handicap.

A few men in the South are fully aware of these facts; the rank and file are not, and the bankers are not. The South has not grown in the past 15 years as it should, nor is it so growing now. Without going farther into the subject of what is now being done, Mr. Swank's midsummer report can be cited, this stating that of 29 blast furnaces in course of construction in the United States on June 30, only one was in Alabama, and none in any other Southern State. Of three furnaces being rebuilt, one was in Virginia and one in Alabama. Of 13 projected furnaces, not a single one was in the South. Here is a total of 45 furnaces, and only three credited to the South.

An era of new blast-furnace erection in the United States is just drawing to its close. The next may be soon, or far in the future, but whenever it may be, then the South will surely come into its own.

SUMMER LEGISLATURES.

[*Knoxville (Tenn.) Sentinel.*]

It is a curious fact that the summer Legislature is an institution at present only known to the South. Georgia, Alabama and Louisiana are given to this governmental device. In Georgia it is an annual affair. In Alabama the Legislature convenes quadrennially, and, like nearly all the other States, begins the session in January. Meeting less frequently than the legislative body of many other States, a considerable interim is allowed to intervene between the long and the short session. This year it was seen fit to have the latter in midsummer. The Louisiana Legislature meets in the middle of May and sits for 60 days biennially. If in continuous session this throws adjournment at the nearest to the middle of July.

This seems a strange arrangement for a section in which the heated term is most protracted, oppressive and debilitating. The argument may be made that weather conditions will contribute much to stay that activity which manifests itself in freak measures, pernicious log-rolling, blackmailing schemes and political slate-making, which so often bring State Legislatures into disrepute. Too, since the Legislature is composed so largely of farmers, and the summer time is their busy season, the presumption is that they will be in haste to transact the needful business of the State and to return speedily to their homes in response to the pressing demands of personal affairs.

If the reasons assigned controlled or were taken into consideration in the fixing of legislative sessions, there is to be found a sound basis for the procedure. However, that summer Legislatures sit out their full terms and are charged with all the excesses common to legislative bodies prove such grounds for summer sessions to be ill-founded.

The highest temperature ever reported by the United States Weather Bureau at Atlanta, Ga., was 100; at Montgomery, Ala., 107, and at Pensacola, not far west of Tallahassee, 103. This is the record up to December 31, 1905. With the prevalence of torrid heat, either prolonged or intermittent, at once is seen the difficul-

ties under which any body labors in attempting at serious lawmaking.

Not to speak of sunstrokes, the heated season is the period when insanity most frequently occurs; when suicides follow close on to one another; when violent "brain storms" burst forth; when great wars are planned and break forth; when mutinous mutterings are heard; when bloody riot runs rough-shod—in short, when the frenzied brain and the murderous hand supplant the cool head and the self-controlled will. To enumerate instances would be commonplace; to cite examples, a matter of supererogation. The seeds of the Civil War were most widely sown in the summer of 1860, preceding the presidential election in the fall, and burst forth full blown in the following summer. The Franco-Prussian War broke forth in the summer of 1870. Coming to nearer dates, "Americana dementia" developed in Harry Thaw on a sweltering night in June, 1906. The Brownsville riot took place in August following.

Let the States that essay the intricate, complex tasks of legislation in midsummer take a lesson from the brute creation. Left to its own sweet impulses the brute resorts only to such activity as supplies the most needful wants of the body in the morning and evening hours. When the sun's heat is most intense and its glare most intolerable the cow hunts the cool shade of a spreading tree to chew her cud, or beneath it stands knee-deep in the limpid waters of some rippling brook; the horse betakes himself to a shady retreat, where his only motions are those of fighting the pestiferous fly that seeks his life blood; the hog revels in his mud hole or lies sprawling under the cover of some shed.

There are times and seasons for all things, but all things seemingly untimely and unseasonable is a Legislature in the South sitting during midsummer.

WASTES.

[*New York Tribune.*]

One of the minor reforms achieved by Dr. Bensel, the new street-cleaning commissioner, throws a brighter light on the value of the "miscellanies" hidden in the rubbish daily swept from the city streets. Upon assuming office Dr. Bensel found one contractor paying \$160 a week for the mere privilege of pawing over the dirt captured by public brooms in the Bronx alone, and another contractor paying \$1346.79 weekly for the same privilege in Manhattan. The new commissioner straightway called for new bids, and—probably to his surprise—saw the two old contractors out-bidding a dozen competitors by offering \$200 and \$2112.79, respectively, for the Bronx and Manhattan.

As the bidders have to hire skilled searchers, and presumably hope to turn an honest penny for themselves, the gross weekly receipts from Father Knickerbocker's dustpan must mount merrily into the thousands. The old gentleman throws away in his annual sweepings from \$150,000 to \$200,000 worth of old rubbers, ribbons, wire, pocket knives, bottles, corks, buttons and 10,000 varieties of lost valuables, ranging from a lock of poor dead Fido's hair up to a 50-karat Kimberley "sparkler." The moralist is tempted to adorn this sad tale of waste with a brief sermon on the carelessness of man, but the statistician gets a strangle hold on the preacher by noting that the average Manhattanite contributes less than seven cents' worth of valuables and invaluables

to the municipal dustpan annually. Of course, the moralist may mutter that there is no such person as an "average Manhattanite," all Manhattanites deviating widely from mediocrity. But the slur does not disprove the statistician's claim that, in spite of the apparently large value of the privilege of searching ashcans, New Yorkers are not so careless of their property as a night on Broadway might lead one to suppose.

SAVING BY A CANAL.

[*New York Commercial.*]

About 30,000 vessels are said to pass around Cape Cod in a year, and the number is steadily increasing; in fact, it is expected that within three or four years this number will increase to 40,000. Now, as 23 per cent. of all the shipwrecks on the Atlantic coast line of the United States occurs off Cape Cod, and as the construction of the Cape Cod Ship Canal will bring Boston 74 miles nearer New York, it requires no great stretch of imagination to figure out the immediate and striking importance of the projected canal to the coastwise shipping of the country.

Indeed, when it is recalled that the construction of a 12-mile canal is all that has stood between present conditions and the great saving of life, time and expense incident to such construction, it is astonishing that the canal idea was not pushed to realization long years ago. It is all the more astonishing from the fact that the need of some sort of a canal across the narrow part of the Cape Cod projection of Massachusetts was recognized, according to the records, some 230 years ago. At that time it was proposed by the Sandwich citizens to construct a waterway from the north shore to the headwaters of the Monument river, which was then navigable up to the narrow neck of land that it was proposed to remove in making the necessary connection.

It remained, however, curiously enough, when we recall the history of the Erie Canal, for DeWitt Clinton Flanagan, interested in dredging enterprises, to set the ball a-rolling which is to result in an early ship canal of great and increasing importance. Mr. Flanagan's ideas, justified by the engineering figures of William Barclay Parsons, and the necessary \$12,000,000 supplied by August Belmont, will give us a coastwise short cut to Boston by 1910.

The canal, which will be 12 miles in length, will start at the famous Gray Gables, home of ex-President Cleveland, on Buzzard's bay, and extend to Sandwich, on the north shore, some eight miles. To this are to be added some four miles of approaches to be constructed. With a depth of 30 feet the width of the canal will vary from 250 to 300 feet at the surface and will average about 160 feet at the bottom.

The capacity of the canal on the basis of four miles speed per hour for boats in transit and a half-hour headway would be nine vessels at any one time. But if, according to Remsen Crawford, the headway is likely to be reduced and the speed increased to six miles an hour, the canal will be able to accommodate 60,000 to 80,000 vessels a year, which provides for the present normal rate of increase of traffic for many years to come. With reasonable tolls it is figured that 19 out of every 20 vessels and strings of coal barges will take the short cut. The canal's completion will mean much to both the shipping and the manufacturing interests of New England, as all luckily now see.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

NEW ORLEANS TO HOUSTON.

Frisco Takes Over the Colorado Southern Line in Louisiana and Texas.

The Frisco system has formally leased the Colorado Southern, New Orleans & Pacific Railway, which is now being completed and which will probably be operated throughout its entire length from Baton Rouge, La., to Houston, Texas, by January 1. The Texas part of the line has been finished and will probably be operated, together with part of the route in Louisiana, by the first of October, a portion of it having been in operation for some time. The large bridge at the Atchafalaya river is delaying completion of the through line to Baton Rouge, high water in the river and also in the swamp of the same name having interfered with the work. This is all expected to be finished before the end of the calendar year.

This new property, which has been recognized as a Frisco enterprise practically since its inception, extends from Baton Rouge, La., to Houston, Texas. It consists of the Colorado Southern, New Orleans & Pacific and the Beaumont, Sour Lake & Western railroads, with the Orange & Northwestern as a branch. Entrance to New Orleans will be afforded over the Yazoo & Mississippi Valley Railroad of the Illinois Central system. The new construction was the building of the road between Baton Rouge and Beaumont, and also the extension of the Beaumont, Sour Lake & Western, which was lately completed to Houston.

The line from Baton Rouge to Houston is said to be practically straight, with sidings, each a mile long, at five-mile intervals, all of them being on the same side of the main line, which is regarded as an indication of an intention to double-track the road as soon as possible. Heavy rails have been laid, and it is expected to maintain high speed for passenger trains. The equipment will consist of express engines of the Atlantic and Pacific types, with passenger coaches of the most approved style. The fact that the maximum grade is three-tenths of 1 per cent, and the curvature only three degrees makes high speed both possible and probable. It is expected that the through-train service will be extended to Denver by the Trinity & Brazos Valley and the Fort Worth & Denver City railroads.

GASOLINE MOTOR CARS.

Twenty-Two Building by the Union Pacific—High Speed by a Recent Production.

A report was recently circulated in various newspapers to the effect that the Union Pacific Railroad Co. would build 100 gasoline motor cars at its Omaha shops. The company has been active in its experiments with this type of railroad motive power, and the report attracted attention. Concerning it Mr. W. R. McKeen, Jr., superintendent of motive power and machinery of the Union Pacific at Omaha, under whose direction and according to whose plans the various gasoline cars heretofore built by the company have been produced, writes the MANUFACTURERS' RECORD as follows:

"There may be prospects of an order for 100 motor cars, but I have no information to that effect. We are building 22 motor cars at present. Will unquestionably start more in the future."

A recent trial of a motor car on the Union Pacific is reported in a dispatch from Omaha thus: "Motor car No. 10

left Omaha at 9:05 A. M. August 3 as section 2 of the Overland Limited No. 1, making the run of 290 miles from Omaha to North Platte in 8 hours and 22 minutes. The time of the Overland as scheduled is 8 hours and 30 minutes.

"This car will go into regular service between here and Denver on August 8. There is no longer a question of the ability of these cars to perform this service. The car at one time attained a speed of 65 miles an hour."

Dallas to Greenville.

The Dallas Interurban Electric Railway Co., which proposes to build a line from Dallas, Texas, to Greenville, Texas, about 50 miles, is expected to start operations soon on a new plan. It is reported that the Dallas stockholders in the enterprise will put \$100,000 cash in it, and that another \$100,000 of stock will be offered to the public in that city and along the route.

President D. E. Waggoner of Dallas is reported in the *Times-Herald* of that city as saying: "We hope and expect to build this line entirely of home capital. We don't want to go out of the State for a dollar if we can avoid it. We think we can get enough money right in Dallas and along the line. We are now earnestly at work on the preliminary arrangements, and expect to be doing actual construction before long. As a starter we are going to put up \$100,000. This proves our faith in the enterprise. We do not anticipate a great deal of trouble in getting the other stock subscribed and paid. I am aware that there is talk to the effect that this line is on paper only. We are going to put it on the ground."

The estimated cost of the proposed line and its equipment is mentioned as \$850,000, but it is said that the directors propose to raise \$1,000,000. The company has deposited \$15,000 with the Dallas authorities as a guarantee that the road will be built.

The directors are D. E. Waggoner, I. J. Willingham, C. C. Slaughter, J. B. Nubors, Otto H. Lang, Dan Sonnenthiel, Dr. R. C. Buckner, M. H. Wolfe, L. A. Stemmons, J. Mercer Carter and Chas. T. Alexander. Will T. Henry is attorney, and Mr. Stemmons is secretary.

A late report says that track construction has begun for the Dallas Interurban Railway in Dallas, and that a local line will be constructed before the long route to Greenville is built. J. Mercer Carter and I. J. Willingham are said to be the construction managers, and Mr. Carter is quoted as saying that about \$250,000 are now available for the work.

Frisco's New Shops.

The St. Louis & San Francisco Railroad, or Frisco system, will, it is reported, complete its new shops at Springfield, Mo., by March next. The foundations for the buildings are more than half completed, and the steel work for them is about to be delivered. There will be six buildings on the company's land, which amounts to about 300 acres. The machinery and erecting shop is the largest, measuring 566 feet long by 173 feet wide. It will be built of brick and steel, like the other large buildings. The forge shop will be 245x102 feet; the boiler and tank shop, 344x117 feet; the coach shop, 303x297 feet; the paint shop, 183x182 feet, and the powerhouse, 160x117 feet. There will be a transfer table 80 feet long, with a runway of nearly 1350 feet length. The erecting shop will have 25 pits, and an increase of 300 per cent. can, it is said, be readily made. There will be three electric cranes in this building, one of them of 100 tons. There will also be three other cranes, two of them in the boiler shop and one outside. In the boiler-room there will be six boilers

of a total capacity of 2400 horse-power. These improvements will cost about \$1,500,000.

Lumber Line on Licking River.

The Clearfield Lumber Co., Clearfield, Pa., writes the MANUFACTURERS' RECORD thus:

"We own a large boundary of land and timber in the counties of Rowan, Morgan and Elliott, Kentucky, which we are now developing. It lies on the waters of the north fork of Licking river and its tributaries from the mouth up to its head and over on Little Sandy, in Elliott county.

"We built 10 miles of railroad in the last year, and propose now to extend it about 18 miles up the river to the head of the north fork of Licking river.

"The name of the corporations is Morehead & North Fork Railroad Co.; president, W. M. McCormick of Philadelphia, Pa.; vice-president, A. W. Lee, Clearfield, Pa.; secretary and treasurer, John W. Wrigley, and chief engineer, E. W. Hess of Clearfield, Pa.

"The Snyder Construction Co., Inc., has the contract for the construction and for furnishing the equipment."

Mr. Lee is president of the lumber company, Mr. McCormick is vice-president and Mr. Wrigley is secretary and treasurer. The general manager is W. B. Townsend.

Norfolk & Southern Construction.

The Norfolk & Southern Railway is reported to have done work this year as follows: Between Raleigh & Chocowinity, 100 miles, track laid for 55 miles east from Zebulon, making a total of 80 miles laid east from Raleigh. Washington to Newbern, 34 miles, is finished. Between Mackey's Ferry and Columbia, 23 miles, now being completed, and will be done by September 1. Between Bayboro and Oriental, 11 miles, four-fifths of the grade is done and track will now be laid. Between Farmville and Snow Hill, 10 miles, grading is in progress and will be done early in the autumn. Between Pinetown and Bishop's Cross, 10 miles, work is progressing and some track is laid. J. A. Wilkinson has this contract. J. G. White & Co. of New York have the contracts to Chocowinity, to Snow Hill and to Oriental. The McLean Contracting Co. of Baltimore has the contract for the extension of 10½ miles from Mackey's Ferry to Edenton, N. C., including a 5½-mile trestle over Albemarle Sound.

BOUGHT ANOTHER LINE.

Randolph & Cumberland Railroad Syndicate Gets Raleigh & Western.

Mr. E. W. Shedd, chairman of the board of directors of the Randolph & Cumberland Railroad, Carthage, N. C., is reported to have purchased the Raleigh & Western Railroad, eight miles long from Colon to Cummock, N. C., and which has graded for an extension to Harper's Cross-Roads. It is also said that he has purchased the Cummock mine.

Mr. Shedd, who is from Providence, R. I., and associates propose a large railroad and industrial development in that part of North Carolina in which they are operating, and the Randolph & Cumberland Railroad is now being extended by them. While no announcement has been made, it is presumed that the newly-purchased line will be made part of the railroad property of the syndicate, and that it also will be extended.

Houston Belt & Terminal.

Mr. C. M. Malone, auditor of the Houston Belt & Terminal Railway Co., Houston, Texas, writes the MANUFACTURERS' RECORD confirming the report that the company has filed a mortgage for \$5,000,-

000 to secure bonds for constructing the belt line around Houston and also for building passenger and freight terminals in that city. He further says that the company has purchased 12 blocks of ground in Houston for the site of the passenger and freight depots, etc. The buildings on 10 blocks of this property, numbering 110 houses, have been sold and the purchasers have agreed to remove them within six months. The construction will be pushed. Mr. P. G. Burns is the engineer in charge of this work, with address at Fort Worth, Texas.

Brownsville to Mexico City.

A dispatch from the City of Mexico says that the Tampico line, which is being built by the Mexican Central Railway, will be extended to connect with the St. Louis, Brownsville & Mexico Railway, and that engineers are in the field to survey from Tampico to Matamoras, which is on the opposite side of the Rio Grande from Brownsville, Texas, the southern terminal of the St. Louis, Brownsville & Mexico road. A bridge would have to be built across the Rio Grande, and a year or more ago surveys were made by engineers for the Yoakum lines in contemplation of building it. The making of such a connection would give the Yoakum roads a short through route to the City of Mexico.

Improvements at Raleigh.

The Raleigh Electric Co. of Raleigh, N. C., which operates the street railway there and also conducts a lighting business, is reported to be making extensive improvements. The car sheds and general office and repair shops are being enlarged and remodeled, so that they will be hereafter in a structure of brick and steel. A new steam turbine generator of 500-kilowatt capacity is about to be installed, and a new 440-horse-power boiler will also be put in. These improvements are in addition to the power plant of the company at the falls on the Neuse river, six miles from Raleigh. They are to be completed by the time the State fair opens.

Freight Station at Birmingham.

Mr. M. C. Byers, engineer maintenance of way, St. Louis & San Francisco Railroad, St. Louis, Mo., writes the MANUFACTURERS' RECORD concerning the proposed new freight station at Birmingham, Ala. He says that the question of a station is being considered at present only in a general way with respect to location of buildings and tracks. No detailed plans whatever have been made for the freight station, nor has it been decided what kind of a station will be built in case it is to be erected in the future.

Building a Logging Road.

With reference to the press report that it would build a 10-mile extension of a tram road, Mr. A. C. Ford, president of the Frisco Lumber Co., Sour Lake, Texas, writes the MANUFACTURERS' RECORD thus:

"The only road we are building out of Sour Lake is a standard-gauge logging road, and the present contemplated extension of same will only be about seven miles. Of this amount, three miles is about finished."

Railroad Notes.

The Baltimore & Ohio Railroad's statement for July shows gross earnings \$7,251,903, increase as compared with July of last year \$707,057; net earnings \$2,304,588, increase \$107,729.

A dispatch from Memphis, Tenn., says that the Rock Island is about to build a new incline at Hopefield, Ark., opposite Memphis. The incline will extend about 1300 feet into the river; will cost about \$50,000.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

West Point Manufacturing Co.

The West Point (Ga.) Manufacturing Co. has engaged Charles T. Main and his associate, John E. Porter, both of Boston, Mass., as engineers in charge of building water-power-electrical plant for developing 3000 horse-power at Langdale, Ala., on the Chattahoochee river. This power will be transmitted by electricity for operating the company's additional cotton mill, of which particulars were given last month by the MANUFACTURERS' RECORD. A reinforced concrete power-house about 40x200 feet will be built at one end of dam for the hydraulic and electrical machinery. Contract awarded to Dayton Globe Iron Works Co. of Dayton, Ohio, for water-wheel machinery complete, with all gearing, harness work, head-gate hoists, trash racks, etc., and to Westinghouse Electric & Manufacturing Co. of Pittsburgh, Pa., for electrical equipment.

The hydraulic equipment will include two 39-inch and eight 60-inch improved New American turbines of vertical-shaft type, arranged for installation in open concrete flumes. These turbines will operate under 13-foot head and develop over 3000 horse-power. The vertical shafts will be extended sufficiently to place gearing and harness work for horizontal shafts on power-house floor approximately 10 feet above head-water level. Each of the 39-inch wheels will drive by means of bevel mortise gears a horizontal shaft at 168 revolutions per minute, from which a 100-kilowatt exciter will be belted. Four of the 60-inch turbines will drive a 750-kilowatt 150-revolution-per-minute three-phase revolving-field 60-cycle generator, there being two turbines on each side of the generator and connected by means of bevel mortise gears to horizontal shafts, which will be directly coupled to both ends of the generator shaft. The other four 60-inch turbines will be divided into two units, each consisting of two wheels geared to a common jack shaft and direct connected to a 550-kilowatt 150-revolution-per-minute three-phase revolving-field 60-cycle generator. There will be 19 sets of head gates for regulating flow of water into wheel chambers, each of these gates being about 8 feet 6 inches wide and 10 feet 6 inches high, of double-stem type, and operated by special worm wheel and spur rack hoisting mechanisms.

As previously stated, the new West Point mill will have 35,000 spindles and accompanying looms. Contracts have been awarded for plans and specifications, construction of buildings and furnishing textile machinery.

Consolidated Cotton Duck Co.

The directors of the Consolidated Cotton Duck Co. and the Mt. Vernon-Woodberry Cotton Duck Co. of Baltimore, Md., held a meeting last week and received the semi-annual statement of the Consolidated Cotton Duck Co. for the six months ended June 30. This showed net earnings of \$632,383.45, an increase of \$1583.50 over same period of last year.

Compared with the same period for 1905, the results for 1907 show an increase of \$767,130.73 in the income from sales, an increase of \$218,512.20 in net earnings and an increase of \$193,812.20 in balance

after deducting interest on all bonds, including first mortgage bonds of Mt. Vernon-Woodberry Cotton Duck Co.

The directors of the Consolidated Company declared the usual semi-annual dividend of 3 per cent. on preferred stock, and the directors of the Mt. Vernon-Woodberry Cotton Duck Co. authorized the payment of 1½ per cent. semi-annual interest on income bonds of that company.

The directors of the J. Spencer Turner Company also held a meeting. Their statement for the six months ended June 30 showed earnings of \$125,639.82, which, having deducted all fixed charges, leaves a surplus for the six months of \$77,639.82, an increase over the same period of last year of \$10,000. This company is the selling organization of the Consolidated Company.

Cotton Spinners' Tour.

The itinerary of the special train under the conduct of Mr. M. V. Richards of the land and industrial department of the Southern Railway bearing the party of foreign manufacturers and others on a tour of the cotton belt in connection with the International Cotton Conference at Atlanta in October has been announced as follows: October 3, New York; October 4, Washington, D. C.; October 5, Charlotte, N. C., and Greenville, S. C.; October 6, 7, 8 and 9, Atlanta, Ga.; October 10, Birmingham, Ala.; October 11, Greenwood, Miss.; Heathman, Miss., and Greenville, Miss.; October 12, New Orleans; October 13, Houston, Texas; October 14, Galveston, Texas; October 15, Texarkana, Texas, and Little Rock, Ark.; October 16, Memphis, Tenn., and Corinth, Miss.; October 17, St. Louis, Mo.; October 18, Chicago, Ill.; October 19, Toronto, Canada; October 20, Niagara Falls, and October 21, return to New York city.

The Additional Gaston Mill.

The Gaston Manufacturing Co. of Cherryville, N. C., is now progressing with the construction of its additional mill, of which the MANUFACTURERS' RECORD gave details in March. Contract has been awarded recently for the equipment of machinery, comprising 5000 spindles and accompanying apparatus, to the Whiting Machine Shops of Whitinsville, Mass. The main building will be 77 feet wide by 243 feet long, and will cost about \$17,000; the textile machinery will cost about \$75,000. When completed the mill will employ 125 operatives and produce No. 40 two-ply skein yarns made from Mississippi binder 1 3-16 to 1 1/4 cotton. Messrs. Abee & Edwards of Hickory, N. C., are the architects in charge.

Moore Cotton Mill Co.

The MANUFACTURERS' RECORD of July 18 reported the incorporation of the Moore Cotton Mill Co. of Lenoir, N. C., and last week the incorporators met to effect permanent organization. Mr. F. P. Moore of Globe, N. C., was chosen president; J. V. McCall, vice-president; M. G. Shearer, secretary, and J. O. White, superintendent. They and Messrs. J. M. Bernhardt, H. B. Moore and W. C. Coffey are the directors. Site has been selected and the construction of the plant will begin soon. The company has a capital stock of \$150,000, and has announced its intention to build for 5000 spindles and manufacture 40s to 60s yarns.

Cora Mill No. 2.

Last May the MANUFACTURERS' RECORD stated that the Cora Cotton Mills of Kings Mountain, N. C., contemplated erecting an addition. This company has now decided to build another mill, to be equipped with 10,000 spindles and accompanying apparatus for the manufacture of cotton yarns. It has ordered the bricks

and lumber necessary for construction, and will begin this work in the near future. The plant will be Cora Mill No. 2. At present the company is operating 10,000 spindles and complementary apparatus.

El Paso Chemical & Fiber Co.

Last month the MANUFACTURERS' RECORD reported the incorporation of the El Paso Chemical & Fiber Co. of El Paso, Texas, with a capital stock of \$50,000. The new company has since purchased site and will erect a plant for manufacturing rope, fiber, alcohol and other products from the cactus and other similar desert plants. It will use a process originated by Dr. F. Thatcher. Messrs. A. C. Courchesne, W. W. Fink, L. W. Neil and associates were the incorporators.

Hillsboro Cotton Mills.

The Hillsboro Cotton Mills of Hillsboro, Texas, will add 2500 spindles, 36 looms and accompanying machinery to its present plant of 2500 spindles and 80 looms. The company has awarded contracts for all the new machinery needed except boiler, shafting and pulleys. It will also build a cotton warehouse and 12 tenement-houses for operatives. Some time ago the MANUFACTURERS' RECORD stated that the Hillsboro company contemplated enlarging its mill.

Rowe Knitting Co.

The stockholders of the Rowe Knitting Co. of Huntsville, Ala., will hold a meeting today to consider plans for reincorporating under a new title and increasing capital stock for the purpose of doubling the plant. It is understood that W. I. Wellman, treasurer, has purchased control of the enterprise and will reorganize the company. Company's present equipment is 5120 spindle and 40 looms.

Harris Manufacturing Co.

The Harris Manufacturing Co. of Rock Hill, S. C., has begun the construction of building for its yarn and collar-pad plant recently reported. This structure will be two stories high, 75 feet wide by 140 feet long, and the lower floor will be equipped for manufacturing coarse cotton yarns, while the upper floor will be equipped for manufacturing collar pads. About \$50,000 will be invested.

Laboratory Company to Enlarge.

The Laboratory Cotton Mills of Lincolnton, N. C., will build an additional mill and has awarded contract to A. K. Loftin for the construction of the necessary building. This structure will be two stories high, of brick, 80 feet wide by 100 feet long. At present the company is operating 5020 spindles on yarn production, and will largely increase this equipment.

New Hosiery Mill.

The Skyland Hosiery Co. of Flat Rock, N. C., has been incorporated with capital stock of \$30,000 by Messrs. J. F. Wilcox and F. S. Wilcox of Lynn, N. C., and L. B. Stillwell of New York; purpose, to manufacture knit hosiery.

The Shaw Cotton Mills.

The Shaw Cotton Mills of Weldon, N. C., has been incorporated with a capital stock of \$100,000. This company names the following incorporators: W. T. Shaw, W. A. Pierce, A. C. House and W. E. Daniel.

Another Mill for Shelby, N. C.

A mill for the manufacture of blankets, quilts and several specialties will be built at Shelby, N. C. It will be owned by a company to be organized by Messrs. J. R.

Dover, J. P. Deilingen, L. S. Hamrick and others. Capital stock is \$150,000. Title will be Ella Manufacturing Co.

Textile Notes.

The Lang Manufacturing Co. of West Point, Ga., is reported as to install additional new machinery; present equipment is 3000 spindles and 30 looms.

The Farmers and Bankers' Warehouse Building Association of Fort Worth, Texas, is said to be planning the erection of a large cotton factory in North Fort Worth.

Mr. J. S. Brice of Yorkville, S. C., states that the report, mentioned last week, that he is interested in plans for building a knitting mill at Bowling Green, S. C., is not true.

The Union Cotton Mills of Union, S. C., is understood to be planning the purchase of considerable new equipment to replace worn-out machinery. This company operates 95,600 spindles and 2400 looms.

Mr. A. E. Holton, Jr., of Yadkinville, N. C., who was mentioned in July as proposing to organize company to build knitting mill, has made no definite plans, but will probably do so in the near future.

Messrs. W. S. Robinson, H. F. Forbes and others of Dallas, N. C., are planning the organization of a company to build a mill for spinning cotton yarns. They propose an equipment of 5000 spindles.

The Inman Mills of Inman, S. C., is reported as to build an additional mill, the equipment to be 20,000 spindles and accompanying looms. This company is at present operating 18,336 spindles and 500 looms.

The recent report that the Spray (N. C.) Cotton Mills will build a plant at Walnut Grove, N. C., was erroneous. It arose from a purchase of property at Walnut Grove by one of the officers of the company.

The Corinth Woolen Mills of St. Louis, Mo., will hold a meeting on October 22 to consider increasing capital stock by \$100,000. This plan will give the company a total capital of \$225,000 common stock and \$100,000 preferred stock.

Reports state that the Franklin Cotton Mills of Concord, N. C., will build an additional mill, the equipment to be 12,000 spindles and accompanying machinery. This company is at present operating 7000 spindles on the production of yarns.

The Cherry Cotton Mills of Florence, Ala., is said to have awarded contracts for roving, spinning and twisting machinery to replace worn-out equipment in its plant of 11,008 spindles. Other improvements are understood to be under consideration.

New Equipment.

President J. T. Harahan of the Illinois Central Railroad is reported as saying that contracts have been closed for 3000 additional box cars, delivery on which will begin in September, making the total of cars bought this year 7000. This month 50 locomotives are being delivered to the company.

The Texas & Pacific Railway has filed an equipment contract with Blair & Co. covering 40 10-wheel locomotives, 10 passenger coaches and 3000 freight cars.

The Virginia Southwestern Railway is reported to have given an order to the Western Steel Car & Foundry Co. of Anniston, Ala., for 500 freight cars.

The Atchison, Topeka & Santa Fe Railway, it is reported, will soon order 35 locomotives.

During the past two years about \$100,000 has been spent in Galveston, Texas, upon concrete curbing and cement sidewalks. That expenditure does not include the sidewalk building on the boulevard.

MINING

Arkansas Diamonds.

The United States Geological Survey, referring to recently-announced plans for developing diamond-bearing material in Arkansas, says that although diamonds have been found in at least 30 places in the United States, the only locality where they occur in place has recently been discovered and has been investigated by Mr. George F. Kunz, the gem expert, and Dr. H. S. Washington, petrographer. They occur in an igneous rock similar to that of the South African mines, which forms a small stock near Murfreesboro, Pike county, Arkansas. The first two stones were found August 1, 1906, and since then many of them have been picked up, the total number found at last report being 130. Many are white and of good water, others are yellow, and some are of brown bort. The two largest stones weigh six and one-half karats, one being exceedingly fine white and the other brown. They are found on the surface as well as within the greenish, friable, decomposed peridotite, a rock somewhat like the famous "blue ground" of Kimberly. The property is being actively prospected and developed.

Arkansas Quarries.

Referring to a recent contract with the United States Government for 15,000 car-loads of stone from the quarries near Batesville, Ark., for the Federal prison at Leavenworth, Kan., Mr. George W. Caldwell of the firm of Caldwell & Drake of Little Rock, is quoted as follows:

"The Batesville marble is the best stone I ever worked with for uniformity in quality and color. Two quarries are at present being worked at this point, and the stone from one is almost identical with the stone from the other, making it an easy matter to get all the stone needed for the large buildings. I hope to see the time when the quarries of Arkansas will be worked to their fullest extent, for I believe that some day the stone industry will bring Arkansas more money than the cotton crop does at present. The State is rich in this material, and it needs but more capital to put the product on the market and make the State famous all over the world."

New River Loading for July.

Loading in the New River district for July amounted to 514,755 tons of coal and 663 cars of coke. The coal shipments were carried by 10,882 cars, of which 6550 went to tidewater. The coke was loaded at the following points: Quinnimont, 26; Beechwood, 9; Macdonald, 83; Turkey Knob, 51; Collins, 80; Harvey, 79; Fire Creek, 23; Fayette, 6; Ansted, 143; Rush Run, 20; Brooklyn, 14; Chapman, 21; Kaymoor, 108.

In addition to the above figures, it is stated that the Loup Creek Colliery Co. shipped 11,065 tons of coal and 10,041 tons of coke during the month.

Buy and Leases Coal Lands.

Referring to a report that he has leased coal lands on Winding Gulf, in Raleigh county, West Virginia, Mr. Justus Collins of Charleston, W. Va., advises the MANUFACTURERS' RECORD that he has purchased and leased about 3500 acres, but has not organized a company for its development, and will not do so until later. He states that both the Chesapeake & Ohio and Virginian railways are building to the property, and as soon as they reach it a company will be organized to develop the coal deposits.

Will Develop Mines in Kentucky.

The MANUFACTURERS' RECORD has received information regarding the purchase of coal lands in Kentucky by the Zanes-

ville Coal Co. of Zanesville, Ohio. The property consists of about 1200 acres, which will be developed in the near future by a company to be organized for this purpose, but no definite arrangements have been made as to the equipment to be installed or other details. The general offices of the new company will be at Centertown, Ky.

Iron-Ore Development.

Messrs. J. P. Kendrick, Thomas W. Fritts, J. J. Lynch and A. T. Whitesides, all of Chattanooga, Tenn., have incorporated the Crudup Iron Ore Co., with a capital stock of \$50,000. It is said to be the purpose of the company to develop iron-ore properties near Crudup and At-talla, Ala., consisting of several hundred acres.

Mining Notes.

The Dutch steamer Nederland loaded a cargo of coal at Norfolk, Va., last week for the United States Navy Department for delivery at Honolulu.

The Midstate Mining Co. of Kansas City, Mo., has been incorporated with a capital stock of \$300,000 by Messrs. C. E. Davis, E. C. Moore, C. F. Shields and associates.

The San Antonio Mining Co. of Black-well, O. T., has incorporated with a capital stock of \$100,000. Its incorporators are Messrs. Willard Foster of Blackwell and William J. Leer and Carl Brett, both of St. Louis, Mo.

Messrs. Sydney L. Wilkens, W. S. Bartlett and H. L. Chapin have incorporated at Joplin, Mo., the L-W Consolidated Min-ing Co. with a capital stock of \$600,000: the Tuscarora Mining Co. and the Grand Duke Mining Co., each with a capital stock of \$100,000.

Delaware Incorporating Chinese.

One of the most interesting developments of this era of incorporations of industrial and business undertakings is the recognition by the Chinese of the benefits of such a basis of management and the fact that they seek incorporation in this country. This is brought out in a letter to the MANUFACTURERS' RECORD from Mr. G. B. Lewis, secretary of the Delaware Charter Guarantee & Trust Co. of Wil-mington, Del. Referring to the liberal provisions of the corporation laws of the State of Delaware, he writes:

"It may interest you to know that aside from the many people located in the different portions of the United States who take advantage of our law, its advantages are recognized and are made use of in foreign countries, as we have incorporated companies for a number of Chinese busi-

ness men who are now doing business in China under the corporate laws of Delaware, and the same thing has been done for residents of Russia and a very large number for residents of Cuba."

Gulf Oil Pipe Line.

Dispatches from Beaumont, Texas, state that the Gulf Oil Corporation has completed its 430-mile oil pipe line from Tulsa, I. T., to Port Arthur, on the Gulf of Mexico. Construction work was started early this year, and full details of the proposition were presented in the MANUFACTURERS' RECORD. Transmission tests have been made, and it is understood that a regular transmission of oil will begin at once. The J. M. Guffey Petroleum Co. and the Gulf Refining Co. of Beaumont and Pittsburg arranged for the establishment of this line and organized, to own and operate it, the Gulf Oil Corporation. The latter incorporated with a capital stock of \$15,000,000 and has offices in Pittsburgh, Pa., A. W. Mellon of that city being presi-dent.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Missouri's Timber Yield.

Statistics secured by the State Labor Bureau of Missouri, dealing with the shipments of lumber and timber in that State during 1906, show the total valuation to be \$24,679,476, a decrease, as compared with the value of shipments in 1905, of \$1,638,072. The aggregate of hardwood lumber shipped during the year amounted to 280,042,365 feet; soft lumber, 217,375,000 feet; logs, 74,433,526 feet; railroad ties, 4,915,642; walnut logs, 4,222,576 feet; piling, 10,165,044 feet; fence and mine posts, 2,412,306; cordwood, 287,191 cords; telegraph poles, 26,664; cooperage, 12,648 cars; walnut lumber, 289,028 feet; paper wood, 10,623 cords; tar, 913 barrels; charcoal, 461 cars; excelsior and sawdust, 167 cars; pencil wood, 15 cars. The three largest producing counties in the State were Duncan, New Madrid and Butler in the order named.

New Lumber Company.

The Lebanon (Tenn.) Lumber Co. has been incorporated for the purpose of developing about 1200 acres of timber lands near Lake Providence, in East Carroll parish, Louisiana. The property is estimated to contain about 8,000,000 feet of timber, consisting of oak, ash, cottonwood and gum. It is intended to erect a saw-mill with a daily capacity of from 15,000 to 30,000 feet for its development. Officers of the company are Messrs. B. A. Enloe, president; H. W. Cook, general manager; Alexander McClain, secretary, and F. C. Stratton, treasurer. The officers, with Dr. T. A. Enloe, constitute the board of directors.

New Turpentine Plant.

Articles of incorporation have been filed at Lake Charles, La., for the Producers' Turpentine Co., which is said to be an auxiliary company of the Industrial Lumber Co. of Beaumont, Texas. The capital stock of the new company is \$100,000, and its purpose is to distill turpentine, manu-fac-ture rosin, etc. Its officers include Messrs. Newton R. Wilson, president; Samuel Park, vice-president; Robert M. Hallowell, treasurer, and Louis Albert Morphy, secretary. Offices will be maintained at or in the vicinity of Elizabeth, Louisiana.

Big Development Begins.

The Clearfield (Pa.) Lumber Co., own-ing about 100,000 acres of timber and mineral lands in Morgan and Rowan counties, Kentucky, has completed its large sawmill at Morehead, and is preparing for development work on an extensive scale. The company has also completed a line of railroad from Morehead to Paragon, in Morgan county, and is said to be surveying another line from Paragon up the north fork of the Licking river to Rush branch. It will erect another large mill on the new road.

Gulfport's Shipments

Statistics of lumber shipments from Gulfport, Miss., for July indicate a total of 23,881,000 feet board measure. Total shipments for the first seven months of the year have aggregated 189,022,000 feet.

Will Build Large Wharf.

A report from Savannah, Ga., states that Messrs. Granger & Lewis are making preparations to construct a large lumber wharf just west of the Seaboard docks on Hutchinson's Island, which will be devoted exclusively to their lumber trade. The dock, it is stated, will cover an area of

nine acres, with a frontage of 750 feet on the river. It will have a storage capacity of several shiploads of timber and lumber, and will cost for dredging and construction about \$100,000.

Buys Missouri Timber Lands.

Messrs. Farnsworth, Bills & Co. of Chicago, Ill., are reported to have purchased about 165,000 acres of timber lands in Reynolds county, Missouri, and have formed a syndicate for the purpose of contracting with mills to cut several thousand acres of timber each year, intending afterwards to colonize the land. The property is estimated to contain approximately 750,000,000 feet of timber and 10,000,000 crossties.

Lumber Notes.

Building Inspector W. C. Fulcher of Knoxville, Tenn., issued building permits in that city during July to the amount of \$68,172.

Building operations in the District of Columbiia for July, according to the monthly report of Building Inspector Ashford, amounted to \$967,300.

The steamers Sledrecht and Venus cleared from Pascagoula, Miss., last week, the former carrying 2,419,000 superficial feet of square timber and the latter 2,524,000 feet.

Mr. S. E. Redfern, purchasing agent at New Orleans, La., of the Panama Canal Commission, desires about 10,000,000 feet of yellow pine, beside a quantity of hard-wood lumber.

The Gulf Coast Lumber Exporters' Association, recently organized at Mobile, Ala., to aid in the exportation of Southern lumber through the Gulf ports, has decided to establish an agency in Europe.

Secretary W. G. Harlow of the Mississippi-Louisiana Retail Lumber Dealers' Association announces that the semi-annual meeting of the association will be held in New Orleans on September 17 and 18.

Knoxville Power Co. Plans.

The MANUFACTURERS' RECORD has previously referred to the proposition of the Knoxville Power Co. of Knoxville, Tenn., for the development of water-power and the establishment of a large electrical plant on Little Tennessee river, 40 miles from Knoxville. During the past week the company's stockholders held a meeting to perfect a reorganization and arrange for the construction of the plant. It is understood that they have practically completed arrangements to award contract to Wm. J. Oliver of Knoxville for building the dam, canal and power-house; dam to be 500 feet long and 80 feet high; tunnel to be 5500 feet long; about 40,000 horse-power is estimated to be developed for transmission by electricity to Tennessee cities within a radius of 50 miles, including Knoxville. Later the company will award contracts for furnishing and installing the water-wheel and electrical machinery and constructing the cable lines to convey the electricity to industrial plants. In providing for reorganization the capital stock is increased from \$100,000 to \$2,500,000, and it is expected not less than two years will be required for completing the construction contracts. The contractor is to begin work upon the completion of the Southern Railway Co.'s extension along the Little Tennessee river, this to be ready during the fall. The Knoxville Power Co.'s officers include Charles H. Treat, Treasurer of the United States, of Washington, D. C., who is president, and John T. Wilder of Knoxville, who is general manager. Mr. George H. Sullivan of Cromwell & Sullivan, New York city, is among the Northern capitalists interested in the enterprise.

MECHANICAL

Improved Polishing Equipments.

There are numerous uses for improved materials and equipments for polishing purposes. Managers of various manufacturing plants, especially those producing articles made in part or wholly of metals, know the need for polishing wheels and blocks that will give full satisfaction. Some of the best-known inventors and manufacturers in the industrial field have



"SPRINGFIELD" RING WITHOUT FLANGES.

given consideration to the production of abrasive ways and means, and their introduction has become extensive. Those who are desirous of being informed as to the latest improvements in the abrasive branch of industry should investigate the system of the Springfield Tire & Rubber Co. of Springfield, Ohio. This company manufactures the "Springfield" abrasive compound and "Springfield" abrasive polishing wheels and blocks. It claims for these that they are very economical and long-lived, their especial feature being to dispense with the annoyance and delay of re-



"SPRINGFIELD" ABRASIVE RING WITH FLANGE.

newing leather-faced wheels or re-covering with emery cloth. In order to renew the cutting surface on the face of these wheels when filled with particles of metal, or if wheels get out of true, it is only necessary to put the wheel on a lathe and allow the lathe to run at slow speed while taking a very thin cut off face of wheel. This will renew the cutting power. Frequently this is not necessary, as holding a wet sponge on face of wheel will often renew it. To mention the Springfield wheel as compared to the old style it may be said that when the old-style wheel becomes worn to a small circumference it must be speeded

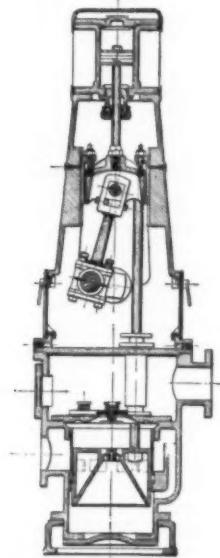


"SPRINGFIELD" RING WITHOUT FLANGES.

greatly in number of revolutions in order to maintain its normal cutting foot travel. When the new-style wheel is worn to a circumference which will require speeding, if not changed in any way, it may be separated from the flange, leaving but little material to be thrown away, and new rings can be attached to the flanges, which are continually usable. In this connection three accompanying illustrations are of interest, showing ring complete with flanges in position, ring without flanges, and flange alone.

Mullan's Suction Valveless Air Pump.

Within recent years the steam turbine has come to be recognized as the natural and most efficient prime mover for electrical generating units; that is, with this provision, that the condenser vacuum shall be extremely high. Few people realize that the efficiency of a Parsons or Curtis steam turbine is increased 20 per cent. when the vacuum is raised from 26 to 28 inches. To secure this extremely high vacuum, however, with the ordinary type of condenser and pump has been found impossible, and as a consequence there have been introduced upon the market a



MULLAN'S VALVELESS AIR PUMP—
SINGLE-ACTING VERTICAL TYPE.

number of so-called "wet and dry" machines for securing this coveted "last inch" of vacuum. These consist of two separate and distinct pumps, one for removing water and another which is distinctly a dry-air pump and usually of very elaborate type.

Owing to objections found in operating these devices, Mullan's crank and flywheel suction valveless air pump was placed on the market, and as evidence of the favor with which it has been received it is interesting to note that already over 80 pumps have been placed in various power-houses, and 50 more are now in process of construction.

Mullan's pumps are offered in a variety of styles, of which the double-acting single or duplex horizontal type is the favorite for land service, while the single-acting upright pump, with one or more cylinders, is more generally used for marine work.

The vertical type, being single-acting, is perhaps easier to explain than the double-acting horizontal type, the operation, however, being otherwise precisely the same.

In the accompanying illustration is shown a sectional view through the center of the vertical pump, the suction opening being at the left and the discharge opening above and to the right. There are no suction valves, the cycle of operations being as follows: Imagine the piston to be at the extreme upper portion of its stroke, close against the pressure valves. The clearance is full of water, which during the up stroke naturally sought the lowest position and was not entirely driven out through the spring valves. As the piston descends on the down stroke it leaves a vacuum behind it, which continues until the upper edge has passed the several inlet passages, which open into the middle of the cylinder at evenly-distributed intervals around its circumference. (These inlet passages are shown in the cut by dotted lines.) It will be observed that their total area is very large, and offers practically no resistance to the entering air and water.

The piston has now completed its downward stroke, and starts on the upward stroke, and immediately closes the inlet passages, the cylinder above it being full of mingled air and water. The air naturally lies above the water and is driven out through the pressure valves first. The water is driven out last, thus leaving no chance for air to remain in the clearance and expand behind the piston on the downward stroke. This same fact remains true of the horizontal type. The water is always behind the air, and never permits it to remain in the clearance. The space above the valve is also full of water, thus forming an effective water seal against entering air. The only chance for leakage which can weaken the condenser vacuum, assuming all joints tight, is evidently that which might result from a loose piston. It is in this connection that a remarkable feature of the pump has been developed. The piston is made entirely of brass, and, as may be noticed, is very wide, and contains several small annular grooves. It was expected that, since the piston fits very closely, the water accumulating in these grooves would form a film between the piston and cylinder, thereby preventing leakage and undue wear. Not even the designer, however, had expected such wonderful results as this arrangement has shown.

After two years' continuous service the first pump built showed no perceptible wear of piston or cylinder, and in order to investigate the action of this water packing under conditions such as would ordinarily have resulted after long service, that is, with a loose fit between piston and cylinder, it was necessary to turn down the piston on a lathe. This was done. The piston was reduced in diameter until three-thirty-seconds inch less than the cylinder diameter, and the pump even then maintained a vacuum of 29 inches.

It will be noted that this compact little pump does with one cylinder the work that has never been done successfully by other devices without a separate cylinder for air and water, and that it is entirely free from the faults that make its competitors expensive, cumbersome and dangerous. Since it handles air and water at one operation, it needs no water jacket. There are no mechanically-operated valves, hence no possibility of water hammer. So far from water being dreaded, it is welcomed; in fact, when the pump is used for dry-air

under average working conditions, maintain at least 28 inches. It is as near fool-proof as any machine could be; is inexpensive as compared with its competitors; seldom needs repairs, and is built so substantially that it will raise water to a height of 30 or 40 feet, in addition to its work of overcoming the pressure of the atmosphere.

Mullan's pump is built by the C. H. Wheeler Manufacturing Co. of Philadelphia, Pa.

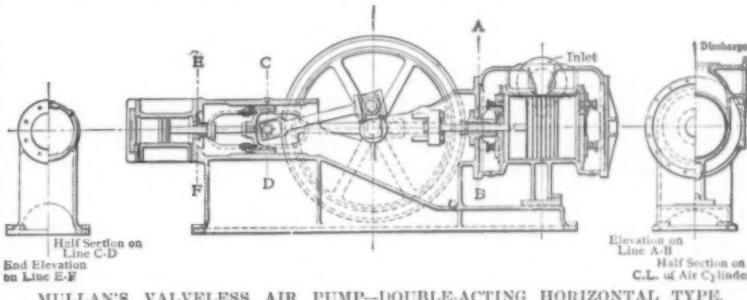
The Match-Less Light.

There are many circumstances in which an electric lamp that can be readily handled and the light directed at the point where a good view is desired is of especial value. For inspection purposes of the kind indicated there is offered the Match-Less Light, of which a view is presented herewith. This lamp is admirably suited for inspecting automobiles and launches, and for many other purposes. It is connected by 10 feet of cord to the spark bat-



THE MATCH-LESS LIGHT.

teries, thus permitting sufficient freedom of movement. It gives about eight candle-power and draws but half an ampere. Its handy character is clearly shown by the accompanying view, and it is evident that the user has both hands free for work that may be required at the point where the light is being directed. The Match-Less Light is manufactured by the Match-Less Light Co., offices in the Caxton Building, Cleveland, Ohio.



MULLAN'S VALVELESS AIR PUMP—DOUBLE-ACTING HORIZONTAL TYPE.

pumping a spray of water in the suction pipe is necessary to lubricate and seal the pump and cool the vapors.

Another excellent feature of this pump is the arrangement of the piston rods, for there are two—one being on the side of the pump cut away, naturally does not show in the cut. These extend only from the crosshead to the piston, and when overhauling is necessary there is no need of disturbing the steam end. In other types the rod is continuous from end to end, and is very difficult to remove.

The shop tests the Mullan crank and flywheel suction valveless air pump has held successfully a vacuum within a half-inch of the barometer, and it is sold under a positive guarantee that it will at all times,

Dr. Henry M. Payne, at present general superintendent and chief engineer of the Mingo Block Coal Co., Williamson, W. Va., has been elected professor of mining engineering and placed at the head of the new School of Mines at West Virginia University, Morgantown, W. Va. Arrangements have been made by which Dr. Payne will retain his present position with the Mingo Block Coal Co. in connection with his work at the university. He will also maintain an office as consulting engineer at Morgantown, W. Va.

The Chamber of Commerce of Clarksville, Tenn., has elected Messrs. M. Savage, president; S. Newberger, vice-president; J. R. Hill, secretary, and F. T. Hodgson, treasurer.

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

BRIDGES, CULVERTS, VIADUCTS

Catlettsburg, Ky.—United States Engineer Office, J. G. Warren, Major, U. S. A., Cincinnati, Ohio, will open bids September 3 for construction of service bridge.*

Charleston, W. Va.—City has passed ordinance providing an issuance of \$18,000 of bonds for completing bridge across Elk river at Virginia street; also \$16,000 of bonds for tearing down the old Keystone bridge and removing and rebuilding same at Spring street, together with necessary fills and approaches. Address The Mayor.

Little Rock, Ark.—Drainage District No. 1 has approved plans and specifications by Lund & Hill, engineers, for construction of improvements recommended by engineers and adopted by Pulaski county. Work to consist of seven miles open ditch, requiring 143,000 cubic yards of earth excavation; reinforced concrete conduit 84 inches in diameter and 2635 feet long; estimated cost, \$76,500. Complete plans and specifications can be obtained from engineers on deposit of \$10, to be returned upon return of plans.

Palatka, Fla.—Putnam county will build bridge across St. Johns river; cost \$50,000; bids to be received until October 9; L. C. Stephens, chairman Board of County Commissioners. (Mentioned August 15.)*

Pocahontas, Ark.—St. Louis & San Francisco Railroad is reported to construct steel bridge across Black river at Pocahontas; J. F. Hinckley, chief engineer, St. Louis, Mo.

Yazoo City, Miss.—Yazoo County Commissioners will construct bridges over Silver creek at Campbellsville, across slough on new road near mouth of Lake George, over prong of Atchafalaya on Richland plantation and over slough near Wolf lake; will repair iron bridge over Panther creek. Bids will be opened September 2; S. S. Griffin, clerk.*

COAL MINES AND COKE OVENS

Altoona, Ala.—Red Ore Mining Co., Gadsden, Ala., will begin the development of coal mines. (See item under Mining.)

Centertown, Ky.—Zanesville Coal Co. of Zanesville, Ohio, advises that 1200 acres of coal land recently noted to have been purchased by it will be developed by separate company; plans for organization and development of new company to be made known later.

Centerville, Ark.—Cotton-Eron Coal Co. is preparing to begin the development of its coal properties.

Charleston, W. Va.—Justus Collins has purchased and leased about 3500 acres of coal land on Winding Gulf; later company will be organized for development. (Recently mentioned.)

Cumnock, N. C.—E. W. Shedd, representing a syndicate, has purchased the Cumnock coal mine and the Raleigh & Western Railroad and will further develop the coal properties.

Flatonia, Texas.—City has leased property to a company which is considering the development of coal deposits. Address The Mayor.

Grayson, Ky.—Rock Branch Coal Co. incorporated by George W. Burton, George Hull and J. G. Morris.

Huntington, W. Va.—Altizer Coal Land Co. incorporated with \$50,000 capital stock by J. L. Caldwell, G. R. Heffey, C. N. Davis and others to deal in coal and mineral lands.

Ledbetter, Texas.—R. P. Hatchworth has purchased 100 acres of coal lands and will organize company to undertake development work.

Ledbetter, Texas.—Big Four Coal Mine Co. is about to begin the development of its coal mines and has closed two-year contract to furnish 200 tons of lignite daily. R. P. Hatchworth is the promoter.

New Orleans, La.—Robert P. Hyams Coal Co., Ltd., Incorporated with \$100,000 capital stock; Robert P. Hyams, president; James E. Zunts, vice-president, and Archie Hall, secretary-treasurer.

Rockdale, Texas.—Rockdale Lignite Co. has increased capital stock from \$10,000 to \$20,000 and changed principal office to San Antonio, Texas.

Rockwood, Tenn.—Roane Mountain Coal & Lumber Co. incorporated with \$50,000 capital stock to develop coal and iron deposits; T. A. Wright, president. (See item under Lumber Manufacturing.)

COTTON GINS

Clarkton, Mo.—Farmers' Gin & Warehouse Co. Incorporated with \$6500 capital stock by J. A. Hargraves, W. T. Davidson, J. F. Hilderbrand and others.

Culloden, Ga.—Culloden Ginning Co. recently reported to rebuild gininery burned last fall, will erect 20x61-foot frame building and 35x15-foot brick building; cost, with machinery, \$7000 to \$10,000; capacity of plant, 60 bales per day; architect and engineer, R. G. Merry of Southern Cotton Oil Co., Atlanta, Ga.; materials and machinery purchased; U. S. Fuller, president of company.

Dunn, Texas.—Farmers' Gin Co. Incorporated with \$6000 capital stock by J. X. Blackard, W. H. Richardson, I. J. Ford and others.

Grubbs, Ark.—Farmers' Union Ginning Co. Incorporated by R. P. Williams, L. Sullivan and others.

Laurel Hill, Fla.—Farmers' Union Warehouse Association is contemplating erection of cotton gin next year.

Maguire, O. T.—Farmers' Union Gin Co. Incorporated with \$5000 capital stock by W. D. Milam and Lem Dowdall, both of Lexington, O. T.; J. Vandever, Frank Swanda and others, O. T.

Oglethorpe, Ga.—Montezuma Manufacturing Co., Montezuma, Ga., will erect cotton gin with daily capacity of 40 bales, at a cost of \$4000.

Raleigh, N. C.—W. D. Buffaloe and F. A. Whitaker will erect two cotton gins, to be operated by a 35-horse-power engine and cost about \$3000.

Richwoods, Ark.—Farmers' Union Gin Co. recently reported incorporated, will erect gin at cost of \$4000. Gin, ginhouse, seedhouse and engine-room will be built; sizes, 24x42, 20x32, 18x30 and 20x24 feet, respectively; capacity 25 bales per day; engineer and

architect, B. Watson; W. J. Nick, president and general manager.

Rutherfordton, N. C. (R. No. 1).—Grove Ginning Co. will be established; will engage in cotton ginning and lumber cutting; frame building 30x60 feet will be erected and equipped; engineer, J. E. Grove; managing officers, Lester Duncan and J. E. Grove.

ELECTRIC-LIGHT AND POWER PLANTS

Belair, Md.—Susquehanna Pole Line Co. incorporated with capital stock of \$50,000 by H. Clay Whiteford, J. Alexander Shriner, Alexander S. Bell, O. M. Whitaker and Jos. T. Deckman. Purpose: to erect poles and string wires for transmission of electricity from the Susquehanna river water-power electrical plant of the McCall Ferry Power Co., 60 Wall street, New York.

Binghamton, Tenn.—James A. Omberg, Jr., Memphis, Tenn., and associates have submitted proposition to City Council of Binghamton to construct electric-light plant. W. W. Ridout has been appointed chairman of committee. (A bond issue of \$20,000 was previously reported voted for construction of water-works, etc.)

El Reno, O. T.—Canadian Light, Heat & Power Co. incorporated with \$100,000 capital stock by Henry Schafer, H. K. Schafer, J. W. Maney and others.

Enfield, N. C.—T. C. McKee and F. M. Pridden are interested in plans to develop water-power at Bellamy's mill and build electric plant to furnish electric lights for Enfield and Whitakers, N. C., requiring an investment of \$7500.

Gollad, Texas.—Dr. L. W. Chilton has been granted franchise for electric-light plant.

Hendersonville, N. C.—T. C. Williams, Jr., Spartanburg, S. C., proposes to construct lake 1950 feet above sea-level, build dam, flooding 35 acres of land, and furnish power for electric railways, lighting plants and other industries.

Hico, Texas.—Hico Electric Light & Power Co. Incorporated with \$10,000 capital stock by J. F. Wieser, F. A. Wieser, H. M. Wieser and V. F. Wieser.

Jackson, Ky.—N. B. Combs has secured franchise to operate electric-light plant, and has purchased the Jackson Electric Light & Power Co. Plant will be equipped with new machinery and be in operation by September 15.

Jacksonville, Fla.—A. A. Kind Electric Co. Incorporated with \$20,000 capital stock; J. F. Thompson, president; A. A. Kind, vice-president; Myron L. Howard, secretary-treasurer, and A. A. Kind, general manager.

Knoxville, Tenn.—Knoxville Power Co. will reorganize and proceed with its plans for establishing water-power-electrical plant on Little Tennessee river, 40 miles from Knoxville. It has awarded contract to W. J. Oliver for construction of the dam, which will be 80 feet high and 500 feet long, a tunnel 5700 feet long and three miles of canal, for developing 40,000 horse-power for transmission by electricity to lighting, power and manufacturing plants. Later on contracts will be awarded for the water-wheels and electrical machinery and for pole lines and wires. Company has increased capital from \$100,000 to \$2,500,000. Reference has been made to this proposition several times by the Manufacturers' Record. Charles H. Treat of Washington, D. C., is president; John T. Wilder of Knoxville is general manager. George H. Sullivan of Cromwell & Sullivan, New York city, is largely interested.

Langdale, Ala.—West Point Manufacturing Co. of West Point, Ga., has engaged Charles T. Main and his associate, John E. Porter, of Boston, Mass., as engineers for installation on Chattahoochee river of water-power-electrical plant to transmit electricity to cotton-mill. Company will build reinforced concrete power-house about 40x200 feet for the hydraulic and electrical machinery, developing 3000 horse-power. Contracts have been awarded to Dayton Globe Iron Works Co. of Dayton, Ohio, for water-wheels, gearing, harness work, head gate hoists, trash racks, etc., and to Westinghouse Electric and Manufacturing Co. of Pittsburgh, Pa., for electrical machinery.

Memphis, Tenn.—Economy Electric Co. Incorporated with \$5000 capital stock by J. B. Hutchinson, E. A. Palham, J. A. Rose and others.

Milwaukee, Wis.—Milwaukee Electric Co. Incorporated with \$5000 capital stock by S. S. Griffin, clerk.

Millen, Ga.—City will engage J. B. McCreary & Co., Atlanta, Ga., as engineers in charge of proposed electric-light plant and water-works; Mayor, H. Q. Bell. (Mentioned August 15.)

New Smyrna, Fla.—S. V. Hough, DeLand, Fla., will establish electric-light and power plant. Franchise has been secured.

Oakland, Md.—Youghiogheny Light & Power Co. Incorporated by Hiram P. Tasker, Alfred G. Sturgis, Truman West, James D. Hamill, Peter A. Chisholm, to develop water-power of the Youghiogheny river, Muddy and Deep creeks, generating electricity for light, power and manufacturing purposes. Estimates and proposals for erection and equipment of plant are being prepared. After plans have been decided upon and total cost ascertained directors will consider an increase in capital stock. For full information address Hiram P. Tasker, Hotel Manhattan.

Oklahoma City, O. T.—Oklahoma City Street Railway Co. has begun excavation work for proposed power plant in Belle Isle addition, and it is expected to begin operations about January 1. Building will be of brick and granite; fireproof; 40 feet high and 100 feet square; concrete foundation. Equipment will include boilers used in generating steam for the plant with a combined capacity of 3200 horse-power and three engines to operate dynamos, each having a capacity of 1300 horse-power. It is estimated that completed plant will cost between \$180,000 and \$200,000. John W. Sharrett, vice-president and general manager. (Referred to July 18.)

Oxford, Md.—Oxford Ice & Electric Co. will establish electric-light plant in connection with ice plant; cost of building and machinery, about \$25,000; electric capacity, about 70 kilowatts; engineers in charge, Pennington & Fairley, 411 Marine Bank Building, Baltimore, Md.; machinery purchased.

Princeton, W. Va.—Princeton Power Co. Incorporated with \$30,000 capital stock by L. H. Perkins, W. B. Honaker, E. W. Hale and others to build electric-power plant.

Russellville, Ark.—Russellville & Ozark Mountain Traction, Light and Power Co. has had plans prepared by E. Cook, engineer, 40½ Main street, Pine Bluff, Ark., for construction of masonry and concrete dam across Illinois Bayou, near Russellville to develop power for transmission by electricity. Bids will be received by Mr. Cook until August 24. Certified check on bank in Pine Bluff for 10 per cent. of amount bid payable to engineer is required. Plans and specifications can be seen at engineer's office and at Brooks & Hay's office, Russellville. (Referred to August 15.)

Spartanburg, S. C.—C. R. Willard & Co. have received contract at \$75,000 to construct dam for developing water-power at Ware Shoals; also at \$50,000 for dam at Brown's Mills for same purpose.

Woodruff, S. C.—Gray Yarn Mills awarded contract to C. R. Willard & Co. of Spartanburg, S. C., for construction of dam to develop power, which will probably be transmitted by electricity for cotton manufacturing. See item under Textile Mills.

Waurika, O. T.—Waurika Public Service Corporation, recently reported incorporated to operate gas and electric plants, will erect and equip plant at cost of \$50,000 to \$60,000; 75-kilowatt electrical system will be installed and 25-ton ice equipment; Wm. F. Davis Engineering Co. is making plans and specifications; later water service also will be operated. (See "Ice and Cold-storage Plants.")*

FOUNDRY AND MACHINE PLANTS

Baltimore, Md.—Hutchinson Bros. Company incorporated with \$50,000 capital stock to manufacture and sell stoves and heating apparatus by C. Fred Hutchinson, 116 North Howard street, Thomas Mahool, Henry Huber and others.

Bristol, Tenn.—Lowe Block Machine Co. Incorporated some time ago with capital stock of \$30,000, has completed and is operating its plant for manufacturing cement-block and brick machinery; N. D. Bachman, president; H. F. Henderson, vice-president; Luke T. Lowe, secretary-treasurer.

Charles Town, W. Va.—Charles T. Kline, Philadelphia, Pa., has purchased plant at Charles Town, which he will operate for the manufacture of structural iron.

Florence, Ala.—B. B. Cohen, president Sheffield Stove & Foundry Co., Sheffield, Ala., will establish stove works in Florence.

Gadsden, Ala.—Alabama Consolidated Coal & Iron Co. will erect foundry and machine

shop in connection with furnace plant, mentioned several weeks ago as completed and blown in on June 6. Main foundry building will be 75x150 feet. Work on foundations has begun. Guy R. Johnson, vice-president; offices at Birmingham.

Gadsden, Ala.—Otto Agricola is organizing company to build iron manufacturing plant, employing about 200 operatives.

Greensboro, N. C.—J. I. Chase Threshing Machine Co. is erecting building, which will double present facilities.

Guthrie, O. T.—Imperial Press Steel & Engineering Co. incorporated with \$125,000 capital stock by G. V. Pattison, Guthrie; Ernest F. Woodward and Chas. H. Meyers, Allegheny City, Pa., and others.

Huntington, W. Va.—West Virginia Foundry & Stove Co. incorporated with \$25,000 capital stock by T. N. Boggess, R. H. Armstrong, F. C. Boggess and others.

Joplin, Mo.—Joplin Brass & Metal Co. organized with \$30,000 capital stock by William G. Sergeant, Joseph Schneider, Jesse C. Owen and others to manufacture all kinds of brass goods, making a specialty of mining machinery.

Joplin, Mo.—Bailey & James Boiler & Machinery Co. incorporated with \$50,000 capital stock by Benjamin F. Bailey, A. J. James and A. M. Haswell.

Kansas City, Mo.—Southwestern Laundry & Machinery Co. incorporated with \$5000 capital stock by E. R. Perry, Edwin Camack, Edwin Krauthoff and others.

Lynchburg, Va.—Reported that the Southern Railway will build shops for repairing motive and rolling stock on the Washington and Danville division and yard with a capacity of 4000 cars near Montview; D. W. Lum, Washington, D. C., chief engineer.

Oklahoma City, O. T.—Lecompte Automatic Car & Air Hose Coupler Co. incorporated with \$500,000 capital stock by C. G. Jones, C. L. Woodward, Lewis Lecompte and others.

Pittsburg, Texas.—Pittsburg Foundry & Machine Co. incorporated with \$50,000 capital stock by P. W. Thorrell, H. D. Knight, W. C. Hargrove and others.

Searcy, Ark.—Carlton Manufacturing Co., recently reported incorporated, will engage in making matt-cutting machines. (Incorrectly noted August 8.)

Sherman, Texas.—Goodlander Construction Co., Kansas City, Mo., has contract to erect shop building for the St. Louis & San Francisco Railroad, plans for which have been prepared by C. M. Roquette, Frisco Building, St. Louis, Mo. Railroad company is expending about \$250,000 in terminal improvements, details of which were mentioned August 8 and previously.

Springfield, Mo.—Silsby Stove & Queensware Co., manufacturer of stoves and importer of queensware, etc., will build new plant.

St. Louis, Mo.—Economy Gas Heater Co. incorporated with \$30,000 capital stock by Otto J. Gosseau, Christian Hauck, Joseph Delabar and others to manufacture and deal in gas and oil burners and heaters.

St. Louis, Mo.—Mound City Machine & Pattern Co. incorporated with \$10,000 capital stock by John T. Van Dillen, Otto L. Swanson and Frank A. Schmitz to manufacture and deal in machinery.

St. Louis, Mo.—Wrought-Iron Range Co. has purchased site 149x220 feet on which to erect factory building.

St. Louis, Mo.—Gravois Cornice & Furnace Co. incorporated with \$4000 capital stock by George E. Schwarz, Albert J. Hummel and Albert Kunz.

Tampa, Fla.—Tampa Foundry & Machine Co. has increased capital stock to \$125,000; Ernest Kreher, president.

Valdosta, Ga.—Southern Locomotive & Car Manufacturing Co. incorporated with \$5000 capital stock by L. Smith, D. P. Smith and George Bertram.

Washington, D. C.—Spencer Cosby, Major Engineers, 22d and K streets, Washington, D. C., will receive sealed proposals until September 16 for constructing machine shop building at the Washington filtration plant.

ICE AND COLD-STORAGE PLANTS

Abbeville, S. C.—The Ice Plant & Laundry Co. organized with G. M. Beasley, president; J. C. Ellis, vice-president; W. P. Greene, secretary, and F. E. Harrison, treasurer.

Amarillo, Texas.—Crystal Ice Co. incorporated with \$30,000 capital stock by Earl Cobb, M. C. Nobles, T. C. Phillips and others; will establish ice plant with capacity of 30 tons per 24 hours; manager, Earl Cobb.

Anderson, S. C.—J. W. Sing, Sumter, S. C., contemplates establishing ice plant in Anderson.

Anderson, S. C.—Anderson Ice Co. will erect ice plant adjoining present factory, increasing output from 25 to 50 tons. It is proposed to install plate plant which will freeze blocks of ice of 2000 pounds; to operate plant by electricity. About \$20,000 will be expended. Company is advertising for plans for building and equipping new plant. Old factory will be operated as an auxiliary plant.

Atlanta, Ga.—Reported that the Atlanta Brewing & Ice Co. contemplates utilizing plant for manufacture of ice.

Fort Mill, S. C.—T. B. Spratt is interested in contemplated establishment of ice plant.*

Little Rock, Ark.—Central Heating & Manufacturing Co. incorporated with \$300,000 capital stock to take over the Little Rock Heating Co.; will build ice factory with daily capacity of 100 tons; George W. Caldwell, president. (See item under Miscellaneous Enterprises.)

New Smyrna, Fla.—S. V. Hough, DeLand, Fla., has secured franchise to construct and operate ice factory.

Oxford, Md.—Oxford Ice & Electric Co. will establish 12-ton ice plant in connection with electric plant; cost of buildings and machinery about \$25,000; engineers in charge, Penniman & Fairley, 411 Marine Bank Building, Baltimore, Md.; machinery purchased.

Prattville, Ala.—Autauga Oil & Fertilizer Co. will build and operate ice plant, investing about \$10,000.

Quanah, Texas.—Quanah Light & Ice Co. recently reported incorporated, is contemplating rebuilding and enlargement of ice plant; at present 10-ton plant; to be 20 or 30 tons.*

Waurika, O. T.—Waurika Public Service Corporation will establish 25-ton ice plant; Wm. F. Davis Engineering Co. is making plans for building. See "Electric and Gas Plants." (Mentioned recently.)*

IRON AND STEEL PLANTS

Claremore, I. T.—H. C. Armstrong, Iola, Kan., representing large smelter interests, will build smelter, investing approximately \$1,000,000 and employing about 250 men. City will donate a site of 80 acres and furnish water for fire protection.

Cumberland, Md.—Cumberland Steel Co., Merwin McCalig, president, will rebuild plant recently burned at a loss of about \$350,000.

Florence, Ala.—Sloss-Sheffield Iron & Steel Co. has blown in its Philadelphia furnace in East Florence. Improvements costing \$100,000 have been made which have increased capacity of furnace; operating offices at Birmingham; J. C. Maben, president; New York office, 23 Nassau street.

Gadsden, Ala.—Quinn Furnace Co. has awarded contract for additional machinery which will be installed to increase daily output of its charcoal iron furnace, and no more equipment will be purchased. This company was referred to previously as purchased by St. Louis parties. Its new officers are Wm. L. Grace of Gadsden, president; Paul Brown, Jr., of St. Louis, vice-president; H. A. Fuller of St. Louis, vice-president; O. J. Grace of St. Louis, secretary, and J. P. Marshall of Gadsden, superintendent.

Gadsden, Ala.—Southern Steel Co. is reported to build annex to blooming mill to accommodate set of rolls for manufacturing smaller billets; E. T. Schuler, vice-president; offices in Gadsden; New York office, 30 Pine street.

Jefferson, Texas.—Jefferson Iron Co. has completed extensive improvements which have been in progress at its furnace; plant has been repaired, improved and increased in capacity from 50 to 100 tons daily, and now uses coke for fuel instead of charcoal.

Norfolk, Va.—Edward S. Cramp, formerly of the Wm. Cramp & Sons Ship & Engine Building Co., Philadelphia, Pa., and George W. Norris of Edward B. Smith & Co., 511 Chestnut street, Philadelphia, Pa., are understood to have completed the purchase of site for the establishment of a large plant for general shipbuilding and repairing, including the construction of the largest type of battleships. The property fronts 1000 feet on Norfolk's main harbor and 1000 feet on Pescara creek, with a 35-foot depth of water. Reports state that a corporation will be formed, with Edward S. Cramp as president, to establish this enterprise.

Sheffield, Ala.—Sheffield Coal & Iron Co. has blown out its No. 2 furnace for repairs; New York office, Maritime Building, 8 Bridge street.

St. Louis, Mo.—O K Harry Steel Co., re-

ported incorporated August 1 with \$40,000 capital stock, will take over the O K Harry Steel Works, manufacturing steel tanks, culverts and roofing; proposes to install additional machinery and make other improvements to plant; F. L. Nelson, president; Wyan Nelson, vice-president, and Charles M. Hummel, secretary-treasurer.

Wheeling, W. Va.—La Belle Iron Works is reported as contemplating the erection of additional mills, furnaces and a Bessemer steel plant in connection with recently announced increase of capital stock from \$7,500,000 to \$10,000,000; general offices at Steubenville, Ohio; A. J. Clarke, vice-president; branch offices at Wheeling.

LUMBER-MANUFACTURING PLANTS

Alachua, Fla.—W. B. Phifer Company, recently reported incorporated, will operate sawmill and naval store; capacity, 30,000 feet lumber per day and 25,000 shingles; president, W. B. Phifer; principal address, Gainesville, Fla.

Alexandria, La.—Looney-Rives Lumber Co. organized with \$12,000 capital stock; Thomas L. Weaver, president; H. J. Rives, vice-president, and F. W. Looney, secretary-treasurer.

Beaumont, Texas.—Nonn Mills Lumber Co. is making improvements to plant, including the installation of gang saw in addition to present band-saw equipment, increasing capacity from 100,000 to 150,000 feet per day, and turpentine plant for boxing from 2000 to 3000 acres of timber. Company is also installing small experimental turpentine plant for manufacturing turpentine and resinous products from slabs, waste wood, dead wood and other refuse products of the mill and yard; if successful, will install larger plant.

Brownell, Texas.—Kirby Lumber Co., Houston, Texas, is having plans prepared for erection of sawmill near Brownell; will probably equip with double bandsaw, gang-saw, drykiln, planer and electric lights; daily capacity, between 175,000 and 200,000 feet.

Carney, Ala.—Styx Lumber Co. incorporated with \$5000 capital stock by W. W. Olney, K. S. Cooper and W. F. Montgomery.

Clear Run, N. C.—Clear Run Lumber Co. incorporated with \$50,000 capital stock by Robert F. Rankin, Mount Holly, N. C.; Robert R. Ray, R. H. Merritt, George L. Webb, all of McAdenville and others.

Cornerstone, Ark.—Cypress Lumber Co. incorporated with \$5000 capital stock by J. W. Rowland, R. S. Finney, J. W. Webster and W. A. Murray.

Curtistown, Ala.—Erie Lumber Co. incorporated with \$100,000 capital stock; D. G. Curtis, Erie, Pa., president; A. E. Swann, Columbus, Miss., vice-president; M. W. Shreve, treasurer, and C. E. Knoepel, secretary, both of Erie, Pa.

Damascus, Va.—Damascus Lumber Co. has purchased about 12,000 acres of timber for development. Band mill, with resaw and planer, will be erected; capacity, 60,000 to 75,000 feet per day; mill to be in operation by December 1; president, H. E. Clark of Glen Campbell, Pa. J. W. McCullough of Friendsville, Md., is interested; general manager, James Dowler; Philadelphia (Pa.) office, 1014 Commonwealth Trust Building. (Mentioned August 15.)

Dickson, Tenn.—American Lumber Co., Chicago, Ill., has purchased through its agent, Norman Petty of Dickson, the John Donegan tract of timber land in Dickson county.

Ensley, Ala.—Pioneer Lumber Co. incorporated with \$15,000 capital stock by F. J. Sheppard, H. C. Russell, Jr., and S. E. Grant to manufacture and deal in building material.

Fairmont, W. Va.—Parkersburg Lumber Co. incorporated with \$25,000 capital stock by Murray Dickerson, C. F. Barnes, J. F. Ritchie and others; will operate plant with capacity of 20,000 feet finished lumber; offices at Parkersburg, N. C., also.

Farmers, Ky.—R. D. Page Lumber Co., South Bend, Ind., has purchased at \$150,000 the mills, lumber, etc., of the Licking River Lumber Co. at Farmers.

Fort Smith, Ark.—Van Buren Logging Co. incorporated by George Meyers, F. D. Thompson and Eurah S. Evans.

Fort Worth, Texas.—A. C. Ford and others have purchased about 10,000 acres of timber land; price paid, \$165,000; will not develop property for two or three years.

Gladys, Va.—Oakes Lumber Co. incorporated with \$20,000 capital stock by W. T. Oakes of Gladys (president); J. G. Haythe, Lynchburg, Va., and R. O. Haythe, New York, N. Y.

Glasgow, Ky.—Hicks-Wilson Lumber Co. has purchased the timber on 2000 acres of land in Rockcastle county at \$48,000 and will begin immediate development.

Glendora, Miss.—Farrin-Korn Lumber Co., Cincinnati, Ohio, and Memphis, Tenn., Frank Conklin, Southern manager, has purchased the circular-saw mill of the Hoyt & Woodin Manufacturing Co. at Glendora, and expect in the near future to convert it into a band mill and resume operations. Purchasers now control a tract of timber land and are considering the purchase of additional property. Mill, when remodeled, will have a daily capacity of about 35,000 feet of hardwood. Cost of buildings and machinery will be \$15,000. M. B. Farrin is president of the company; C. F. Horn, secretary and treasurer.

Harrisburg, Ark.—Poinsette Lumber Co., recently noted to have purchased land and incorporated, will erect and equip plant at cost of \$150,000 for the production of logs, lumber and railroad ties; manager and engineer, Edward L. Reel; principal address, 521 First National Bank Building, Chicago, Ill.

Henshaw, Ky.—Planing Mill.—I. V. Runyan, Henshaw, Ky., will rebuild planing mill recently reported burned; new building to be 60x120 feet; architect, R. Dunlap; engineer, Emory Allen.

Holly, La.—Gallemore-Martin Lumber Co. incorporated; T. G. Roberts, president; C. W. Gallemore, vice-president; E. H. Martin, secretary-treasurer. (Mentioned July 18 under Shreveport.)

Hydro, O. T.—Hydro Lumber Co. incorporated with \$6000 capital stock by E. M. Wilson, M. E. West, W. H. McVey and others.

Jennings, La.—Houssiere Lumber Co. organized by J. S. St. German, E. Houssiere, Ursin Daigle and A. Latrelle to develop timber land in Calcasieu parish. Sawmill is being erected and machinery has been ordered.

Keithville, La.—Melvin Haden, J. M. Owens and H. H. Bain, all of Shreveport, La., have organized company to establish sawmill near Keithville.

Kissimmee, Fla.—Kissimmee Lumber Co. incorporated with \$50,000 capital stock; C. A. Carson, president and treasurer; T. A. Cranford, vice-president, and S. L. Lupfer, secretary.

Lake Charles, La.—Bear Creek Lumber Co. incorporated with \$50,000 capital stock by W. J. Martin, Herman W. Rock, L. J. Bell and N. D. Pope. Company will develop extensive tracts of timber land on Bear creek in Calcasieu parish and will operate sawmill, manufacture lumber, conduct lumber yards, manufacture picket fence, operate turpentine factories, etc.

Lake Charles, La.—Lebanon Lumber Co., recently reported incorporated with \$50,000 capital stock under Lebanon, Tenn., will develop 1200 acres of timber land near Lake Providence, estimated to contain about 8,000,000 feet of lumber, and will operate sawmill with daily capacity of from 15,000 to 30,000 feet; B. A. Enloe, president; H. W. Cook, general manager; Alex. McClain, secretary, and F. C. Stratton, treasurer, all of Lebanon, Tenn.

Longview, Texas.—Morgan Lumber Co. will rebuild lumber mill at Easton recently burned at a loss of \$7000.

Louisville, Ky.—Ohio Stave & Timber Co. incorporated with \$80,000 capital stock by Christian Schott, Isadore Eisbach, John Roth and others.

Mobile, Ala.—J. W. Black Lumber Co. incorporated with \$25,000 capital stock by John W. Black, W. W. Sibley and John W. Black, Jr.

Mobile, Ala.—Culver Tie & Timber Co., recently reported incorporated, will operate six tie mills; production, yellow-pine ties and timber; capacity 3000 ties per day; president, Horace T. Culver.*

Mt. Sterling, Ky.—Clearfield Lumber Co., Clearfield, Pa., will develop its property in Rowan and Morgan counties. Company controls 100,000 acres of coal and timber land in Morgan county valued at about \$1,000,000. Railroad facilities are being provided, and in addition to mill at Morehead, Ky., company will also build mill to develop the 30,000 acres of timber land recently mentioned as having been purchased at \$100,000. It is estimated that within the next year \$1,000,000 will be expended in developments.

Norfolk, Va.—Halifax Lumber Co. incorporated with \$25,000 capital stock; J. H. Trant, Jr., of Norfolk, president; J. P. Trant, vice-president, and B. L. Trant, secretary-treasurer, both of Portsmouth, Va.

Paradise (not a postoffice), La.—Truck Farm Land Co., Artman Westerfield Crawford,

manager, New Orleans, La., will establish sawmill and box factory. Company controls 15,000,000 feet of gum, cypress and ash timber, which it will manufacture at the new plant.

Rockwood, Tenn.—Roane Mountain Coal & Lumber Co. incorporated with \$50,000 capital stock. Company controls several thousand acres of timber land, underlaid with coal and iron ore, in Morgan county, which it will develop; T. A. Wright, president; John Molynex, vice-president; J. E. Fox, secretary-treasurer, and A. T. Daniels, general manager.

Reynolds County, Mo.—Farnsworth, Bills & Co., Chicago, Ill., have formed a syndicate and taken over 165,000 acres of timber land in Reynolds county, estimated to cut 750,000,000 feet of lumber and about 10,000,000 railroad ties. It is proposed to contract with mills to cut several thousand acres of timber each year, sell the tie stumpage and afterward colonize the land. The Missouri Southern Railroad has completed a standard-gauge road extending through the entire tract.

Rutherfordton, N. C. (R. No. 1).—Grove Ginning Co. will be established to gin cotton and cut lumber; frame building 30x60 feet will be erected and equipped; managing officers, Lester Duncan and J. E. Grove; engineer, J. E. Grove.

Shawnee, O. T.—Taylor Lumber Co. incorporated with \$25,000 capital stock by Thomas and O. G. Taylor of Shawnee and W. B. Taylor, Kansas City, Mo.

Shreveport, La.—American Tie & Timber Co. incorporated with \$25,000 capital stock; D. G. Petty, Sr., president; D. G. Petty, Jr., vice-president, and J. J. Marshall, secretary-treasurer.

Tampa, Fla.—Stubbs Lumber Co. incorporated with \$25,000 capital stock; A. D. Stubbs, president; B. F. Walker, vice-president, and C. B. Stubbs, secretary-treasurer.

Valdosta, Ga.—Lewis Lumber Co. incorporated with \$200,000 capital stock by W. D. Lewis, L. V. Shore and Georgia Land & Timber Co.

MINING

Altoona, Ala.—Red Ore Mining Co., Gadson, Ala., owning 20,000 acres of iron and coal lands in Altoona and Greasy Cove districts, will begin the development of several iron and coal mines preparatory to leasing to operators, who will soon commence active mining operations; Obal Christopher, superintendent, and Kyle Elliott, mining engineer.

Asheboro, N. C.—Asheboro Copper Mining Co. will expend from \$5000 to \$8000 for improvements and developments at its copper mines during the next four or five months. A reduction plant suited to the company's ores will be built by Milton I. Baird of Glenfield, Pa., at a cost of about \$15,000, to be completed within six months. A. J. Thurber is president of Asheboro Copper Mining Co.

Blackwell, O. T.—San Antonio Mining Co. incorporated with \$100,000 capital stock by Willard Foster of Blackwell, William J. Leer and Carl Brett, both of St. Louis, Mo.

Camden, Tenn.—Camden Gravel Co. incorporated with \$6000 capital stock by W. B. Troy, H. T. Graper, L. E. Davis and others.

Chattanooga, Tenn.—Chattanooga Sand Co. has been organized with Leon Bailey manager.

Crudup, Ala.—Crudup Iron Ore Co. incorporated with \$50,000 capital stock to develop iron-ore deposits near Crudup and Attalla, Ala., by J. P. Kendrick, Thomas W. Fritts, J. J. Lynch and A. T. Whitesides, all of Chattanooga, Tenn.

Dalton, Ga.—Southern Limonite Co. incorporated with \$500,000 capital stock by Paul T. Wilkes, William Bell Lowe and F. H. Wiggins to mine iron, manganese ores, etc.

Duncan, I. T.—The Grahamite Company (mentioned last week under Miscellaneous Enterprises as to build fluxing plant) was incorporated with capital stock of \$150,000. It controls extensive tracts of land containing grahamite or glisomite, which deposits will be developed; oil wells will probably be drilled also. J. E. Powers is president; E. W. Morten, Jr., vice-president; E. W. Rose, treasurer; Henry Dorsey, secretary; offices at Dallas, Texas.

Joplin, Mo.—L-W Consolidated Mining Co. incorporated with \$600,000 capital stock by Sydney L. Wilkins, W. S. Bartlett and H. L. Chapin.

Joplin, Mo.—Tuscarora Mining Co. incorporated with \$100,000 capital stock by Sydney L. Wilkins, W. S. Bartlett and H. L. Chapin.

Joplin, Mo.—Grand Duke Mining Co. incorporated with \$100,000 capital stock by Sydney L. Wilkins, W. S. Bartlett and H. L. Chapin.

Kansas City, Mo.—Midstate Mining Co. incorporated with \$300,000 capital stock by C. E. Davis, E. C. Moore, C. F. Shields and others.

Madison county, N. C.—F. O. Werden, Philadelphia, Pa., will increase the output of garnet mine in Madison county, installing new machinery with steam drills and lighting mine by electricity. It is estimated that 125 tons of garnet are shipped each month.

Marfa, Texas.—M. D. Jordan has discovered additional marble deposits on his property, which, it is understood, has been purchased by San Antonio (Texas) capitalists, who will organize a stock company and undertake development work.

Maryville, Tenn.—A. A. Coventry and associates have located a bed of white clay, either kaolin or fuller's earth, which they contemplate developing. Correspondence is invited from interested parties.

Mount Washington, Md.—F. A. Van Antwerp, Ithaca, N. Y., has purchased and will develop copper mines at Mount Washington.

Mulberry, Fla.—Southern Engineering & Contracting Co., P. O. Drawer 628, Savannah, Ga., has contract, covering seven years' work, for removing overburden on phosphate lands near Mulberry. (See item under Miscellaneous Enterprises, Savannah, Ga.)

New Orleans, La.—Foster Creek Concrete Gravel Co. incorporated with \$75,000 capital stock to mine and deal in stone, gravel and sand, etc. George H. Barney, president; J. H. Hines, vice-president, and Charles Menzel, secretary-treasurer.

Virginia, Va.—Joseph H. Bradley, president Columbia Sand Dredging Co., Washington, D. C., has purchased interest held by the Warder estate in stone quarries extending for two miles along Virginia bank of the Potomac river at \$125,000, together with all equipment already installed at \$45,000. It is planned to incorporate company to develop the quarries and supply building material to contractors. Charles G. Smith, Washington, D. C., will be secretary-treasurer of company.

Webb City, Mo.—Elking Land & Zinc Co. incorporated with \$250,000 capital stock by Leopold Krellschlemer, John Burnsides, Otto Weis and others.

Youngs, Ga.—A. E. Young and H. N. Van Devander will erect plant to develop iron ore. Washer is now being erected. Mr. Van Devander is in charge.

MISCELLANEOUS ENTERPRISES

Abbeville, S. C.—Laundry.—The Ice Plant & Laundry Co. organized with G. M. Beasley, president; J. C. Ellis, vice-president; W. P. Greene, secretary, and F. E. Harrison, treasurer.

Abita Springs, La.—Carbonating Plant and Warehouse.—Abita Springs Water Co. will erect central warehouse, in which, it is stated, a carbonating plant will be installed. Building will be of frame; three stories; 100x250 feet; cost \$25,000; Edward J. Larkin, manager. Plans will soon be completed and contract will be awarded.

Alexandria, Va.—Automobile Garage.—Auto Sales & Garage Co. incorporated with \$15,000 capital stock; W. P. Barnhart, president; C. T. Diggs, secretary, and H. L. Quinn, treasurer, all of Washington, D. C.

Asheville, N. C.—Dairy.—Asheville Pure Milk Co. incorporated with \$5000 capital stock by William Johnston, Jr., Rex U. Brown, H. M. Weir and others.

Atlanta, Ga.—Building Company.—Gulton Building Co. incorporated with \$10,000 capital stock by Peter F. Clarke, J. G. St. Armand and George Westmoreland.

Baltimore, Md.—Contracting.—Baltimore Contracting Co. incorporated with \$1000 capital stock by Ervin H. Wine, C. Charles Friedel, 22 East Lexington street; George A. Finch and others.

Baltimore, Md.—Real Estate.—Lake View Realty Co. incorporated with \$20,000 capital stock by Herman Scherr, 557 Calvert Building; Charles F. Stein, Alfred C. F. Smith and others.

Birmingham, Ala.—Construction.—Climax Construction Co. incorporated with \$10,000 capital stock by Allen Northington, H. J. Arrant and A. W. Brazelton.

Birmingham, Ala.—Land Improvement.—South Park Land Co. incorporated with \$10,000 capital stock by George A. Williams, E. L. Williams and G. F. Lindsey.

Bowling Green, Ky.—Publishing.—J. T. Doers of Bowling Green; Dr. A. D. James, Penrod, Ky., and J. E. Cully, Burkesville, Ky., have organized company with \$5000 capital stock to publish a newspaper. Mr. Cully will be in charge.

Branchville, Va.—Telephone System.—Union Telephone Co. incorporated by W. R. Sykes (secretary), J. V. Rogers, both of Branchville; W. W. White of Boykins, Va., and others.

Bristol, Tenn.—Publishing.—News Publishing Co. incorporated with \$20,000 capital stock by E. A. Warren of Bristol; Paul Devine, Johnson City, Tenn.; W. B. Bachman, Bluff City, Tenn., and others.

Centerville, Tenn.—Bottling Works.—Company has been organized with \$6000 capital stock by A. H. Grigsby, A. J. Robertson, C. A. Horner and others to establish bottling works and laundry.

Chattanooga, Tenn.—Construction.—North American Builders Co., Hunter S. Seabright, president, recently reported incorporated, will undertake general building construction.

Clinton, O. T.—Storage.—Clinton Storage Co. incorporated with \$50,000 capital stock by A. Swale of Clinton, D. E. Clymer, El Reno, O. T., and H. Smith, Arapaho, Okla.

Covington, La.—Laundry.—Covington Laundry Co., Ltd., recently noted to be organized, will erect and equip building at cost of about \$5000; capacity, work to amount of \$200 per week; machinery not purchased; address, Henry B. Ayer, Box 233.*

Cumberland, Md.—Telephone System.—Chesapeake & Potomac Telephone Co. (main address, 5 Light street, Baltimore, Md.), will establish conduit telephone system. (Recently noted as petitioning city for permission.)

Florence, Ala.—Oil Wells.—George Schall will develop oil wells.

Fort Mill, S. C.—Bottling Works.—T. B. Spratt is interested in contemplated establishment of bottling works.*

Fort Myers, Fla.—Fruit Growing.—New Prospect Fruit & Development Co. incorporated with A. Henley, president; E. R. Corbett, vice-president, and C. W. Collins, secretary-treasurer.

Fort Worth, Texas—Hardware.—Fort Worth Heavy Hardware Co. incorporated with \$25,000 capital stock by A. J. Roe, William Capps, John S. Moton, president; John F. Del Corral, vice-president, and J. W. Fay, secretary-treasurer.

Fort Worth, Texas—Cotton Compress.—Farmers and Bankers' Warehouse Building Association is said to be planning the erection of a large cotton compress in North Fort Worth.

Galveston, Texas—Jetty Construction.—Charles Clarke & Co. were lowest bidders at \$358 per ton for repairing jetties at mouth of Brazos river. About \$35,000 is available. Capt. J. C. Oakes, U. S. engineer in charge.

Galveston, Texas—Banana Company.—Southern Banana Co. incorporated with \$5000 capital stock by V. Mistretta, W. G. Shaw, Edwin Lamm and others.

Galveston, Texas—Land Improvement.—Broadway Improvement Co. incorporated by R. B. Wilkins, W. T. Armstrong, Joseph Lobit and others. Company has purchased 17 blocks of land at \$51,000; intends to fill the property and sell it for residence purposes. It is probable that the filling will be done by dredges from Offatts bayou.

Georgetown, Ky.—Oil Pipe Line.—Indian Refining Co. has completed survey for its proposed pipe line from oil fields near Casey, Ill., to Georgetown. It is understood that this pipe line will be 230 miles long, and the oil conveyed will be refined at the company's plant, which has a daily capacity of 4200 barrels of oil.

Gracemont, O. T.—Telephone System.—Spring Creek & Anadarko Telephone Co. incorporated by J. F. Prewitt, A. M. Pickett, C. A. Robinson and others.

Hartensburg, Ky.—Cannery.—Hartensburg Canning Co. incorporated with \$7000 capital stock by T. J. Hook, H. Alexander and W. R. Pate.

Houston, Texas—Printing Plant.—Paragon Printing Co. incorporated with \$5000 capital stock by W. F. Lone, J. T. Browning and Miss Elnette Browning.

Houston, Texas—Townsite.—Turning Basin Improvement Co. incorporated with \$70,000 capital stock to open land at foot of turning basin, 600 feet from deep water, and develop it as townsite, to be known as the Seaport addition; K. H. Cawthon, president; Simon Preister, secretary, and David S. Price, treasurer.

Jackson, Tenn.—Hardware.—McGee-Ross Hardware Co. organized with \$50,000 capital stock by W. B. McGee and Hugh Ross. Jensen, Fla.—Navigation.—South Florida Navigation Co. incorporated with \$25,000 capital stock. H. W. Bessey is president; H. E. Sewall vice-president, Harry Jennings secretary-treasurer and Crosby Thompson general manager.

Kansas City, Mo.—Land Improvement.—Home Land & Building Co. incorporated with \$15,000 capital stock by M. A. Fyke, E. L. Snider, E. W. Shannon and others.

Lansing, W. Va.—Telephone System.—Lansing Telephone Co. incorporated with \$5000 capital stock by D. B. Crawford, R. R. Crawford, W. R. Dickerson and others.

Little Rock, Ark.—Heating Plant.—Central Heating & Manufacturing Co. incorporated with \$200,000 capital stock to take over the Little Rock Heating Co. New company will continue to furnish heat by means of hot-water pipes, and will expend about \$50,000 in improvements to plant, including the installation of additional equipment, extension of mines, etc. In addition to supplying heat, company will build ice factory with daily capacity of 100 tons; George W. Caldwell of Little Rock, president; J. M. Spalding, Hartford, Ark., vice-president; Tom V. Wilson, secretary, and W. M. Kavanaugh, treasurer, both of Little Rock. (Referred to recently.)

Locust Mount (P. O. Jonesboro), Tenn.—Telephone System.—Locust Mount Telephone Co. incorporated with \$5000 capital stock by S. T. Martin, R. A. Walker, Jesse Hunt and others.

Louis, O. T.—Telephone System.—Louis Farmers' Co-operative Telephone Co. incorporated by C. D. Johnston, J. D. Sanders, B. F. Waller and others.

Montgomery, Ala.—Laundry.—Chris Wehage will erect three-story building at a cost of \$4000 to be equipped as laundry.

Nashville, Tenn.—Nashville Abattoir, Hide & Melting Association, Rudolph G. Fehr, president, 1416 Adams street, has awarded contract to C. W. Rives & Co. for erection of chillroom addition to plant and installation of refrigerating equipment, total cost being between \$20,000 and \$25,000. Building will have stone foundation, be of brick construction, one story and basement high and contain two chill-rooms.

New Orleans, La.—Contracting.—Central Improvement Co. incorporated with \$100,000 capital stock to conduct general contracting and building enterprise; John S. Moton, president; John F. Del Corral, vice-president, and J. W. Fay, secretary-treasurer.

New Orleans, La.—Levee Work.—Board of Commissioners, New Orleans Levee District, Masonic Temple, New Orleans, will construct portion of new levee, with retaining walls, in Third district; length, 1700 feet; contents, 50,000 cubic yards of earthwork, 2700 feet of retaining wall and 100,000 feet B. M. of lumber in revetment. Also portion of new levee, with retaining walls, in Fourth district; length, 1500 feet; contents, 30,000 cubic yards of earthwork and 2500 linear feet of retaining wall. Construction of banquette on land side of levee in Sixth and Seventh districts; length, 3500 feet; contents, 40,000 cubic yards of earth. Bids will be opened August 27; Charles T. Yenni, president; T. J. Duggan, secretary.*

New Smyrna, Fla.—Telephone System.—S. V. Hough, Deland, Fla., has secured franchise to extend telephone system from Lake Helen, Fla., to New Smyrna.

Norfolk, Va.—Dry-dock.—The Crandall Company is reported as to prepare basin in which to install floating dry-dock.

Oklahoma City, O. T.—Land Improvement.—Southern Missouri Land Co. incorporated with \$35,000 capital stock by A. T. Shad and R. E. Brownell of Oklahoma City, L. A. Lewis, New Madrid, Mo., and others.

Opelousas, La.—Printing Plant.—Courier Printing Co. incorporated with \$15,000 capital stock by W. C. Perrault, J. B. Sandoz, J. W. Lewis and others.

Paducah, Ky.—Tannery.—Paducah Tanning Co. incorporated with \$30,000 capital stock by Muscoe Burnett, William Stewart and W. L. Bower.

Paducah, Ky.—Hardware.—Paducah Iron Co. incorporated with \$10,000 capital stock by Fred Speck, Walter McDowell and J. W. Speck.

Pensacola, Fla.—Land Improvement.—Packard Land Co. incorporated with \$25,000 capital stock; C. C. Packard, president; I. W. Packard, vice-president, and H. J. Packard, secretary-treasurer.

Pilot Point, Texas—Telephone System.—North Texas Telephone Co. will erect building and install equipment for telephone exchange of 200 subscribers; cost \$6000; president, S. W. Porter; secretary and treasurer, C. A. Shock; engineer, W. E. Burney; architect, Z. B. McCann, Whitesboro, Texas; principal address, Sherman, Texas. (Recently noted to have secured franchise.)

Plattburg, Mo.—Trimbleite Company incorporated with \$125,000 capital stock by W. J. Trimble, C. H. Thompson, Alexander Shepherd and others.

Russellville, Ark.—Oil Wells.—Company will soon be incorporated with \$25,000 capital stock by Wm. Brooks, Wm. Hay, J. F. Saurenman and others to develop gas and oil on 11,000 acres of land.

San Angelo, Texas—Cotton Compress.—J. G. Timmon, Waco, Texas, is considering erection of cotton compress at San Angelo.

San Angelo, Texas—Crematory.—City has voted \$20,000 of bonds for erection of crematory, etc. Address The Mayor.

Savannah, Ga.—General Construction.—Southern Engineering & Contracting Co., P. O. Drawer 628, lately reported incorporated with capital stock of \$60,000, has following officers: President, Geo. V. Denny; vice-president and manager, E. L. Blood, and secretary-treasurer, J. H. Haslam. Company has contract to remove overburden from phosphate lands in Southern Florida, near Mulberry, covering seven years' work. It will also engage in general engineering and construction, such as erecting power plants, manufacturing plants, etc., and will act in connection with the Georgia Supply Co.

Shreveport, La.—Oil Wells.—Blanchard Oil Co. incorporated with \$17,500 capital stock by Rollo M. Cole, Harry M. Phillips, Charles J. Horn and others, all of Chicago, Ill.

Slater, Ky.—Telephone System.—Slater Telephone Co. incorporated by C. E. Batts, T. J. Davis and F. M. Ashby.

Springfield, Fla.—Land Improvement.—Springfield Realty Co. incorporated with \$100,000 capital stock to develop real estate in West Springfield. George W. Clark is president, T. H. Sompayrac vice-president and D. H. Dolg secretary-treasurer.

Sulphur, I. T.—Gas and Oil Wells.—Spion Kop Oil & Gas Co. will drill for gas and oil. Company has a 20-year exclusive gas franchise in city and gas and oil leases on land surrounding city; T. E. Molacek, president; I. C. Renfro, first vice-president; J. L. Crawford, second vice-president, and V. C. Wall, secretary-treasurer.

St. Louis, Mo.—Hardware.—Patton & Maginnis Hardware Co. incorporated by Newton R. Patton, Raphael J. Maginnis and Tillie M. Patton.

Washington, D. C.—Quarries.—Columbia Granite & Dredging Co., recently incorporated, has purchased Potomac quarries and taken over plant and wharf of Columbia National Sand Dredging Co.; quarries and wharf of Potomac Stone Co. and plant and property of Charles G. Smith & Sons.

Winchester, Tenn.—Laundry.—Gem Steam Laundry Co. incorporated with \$5000 capital stock by G. W. Taylor, E. W. Chattin, Ed. Wenger and others.

MISCELLANEOUS MANUFACTURING PLANTS

Atlanta, Ga.—Lime and Cement Plant.—Pielmont Slate & Cement Co., with offices in Austell Building, is arranging for establishment of limekilns and Portland-cement plant on Seaboard Air Line Railway; will make specialty of hydrated lime; president, E. C. Lester; vice-president and general manager, G. A. Beattie.*

Atlanta, Ga.—Coffin Factory.—Gate City Coffin Co. will increase capital stock to \$500,000.

Baltimore, Md.—Duke, Montague & Gillett Company.—straw-hat manufacturer, 16 South Howard street, it is reported, will erect new factory building on Park avenue, between Preston and Biddle streets. The site is 100x100 feet.

Baltimore, Md.—Novelties, etc.—Baltimore Enamel & Novelty Co., foot of Allen street, Locust Point, will erect one-story addition to its plant, about 64x122 feet, after plans by B. C. Sandlass, engineer; Henry S. Rippl, 7 Clay street, and George Bunnecke & Sons, 305 St. Paul street, are estimating.

Brownsville, Ky.—Canning Factory.—Brownsville Canning Co. will establish fruit-canning factory at cost of \$5000; capacity, 8000 cans daily; officers, Gilles Vincent and John A. Tryon.

Buffalo Ridge, Va.—Distillery.—Blue Ridge Distilling Co. incorporated with \$15,000 capital stock; J. B. Brammer, president; J. B. Conner, vice-president, and D. I. Boyd, manager.

Cambridge, Md.—Rubber Plant.—Leicester Rubber Co., Trenton, N. J., contemplates establishing plant in Cambridge.

Catlettsburg, Ky.—Cement-block Manufacturing.—Pearl Davidson and associates are organizing company to manufacture cement blocks for building purposes.

Charleston, S. C.—Candy Factory.—Puckhaber Bros. Co. will erect addition to building and increase capacity of candy factory to about 15,000 pounds daily; cost of improvements, \$3000; addition to be 46x46 feet, three stories brick and frame; engineer and architect, H. D. Schumacher.

Childress, Texas—Implementation Works.—Norris Implement Co. incorporated with \$15,000 capital stock by S. P. Britt, J. S. Knight, T. J. Tingel and R. H. Norris.

Deer Creek, Md.—Flint Mill.—American Pottery Supply Co., Continental Building,

Baltimore, Md., is considering the rebuilding of flint mill at Deer Creek.

Elizabeth (P. O. Lake Charles), La.—Turpentine Distillery.—Producers' Turpentine Co. incorporated with \$100,000 capital stock to extract turpentine from timber lands owned by the Industrial Lumber Co., Beaumont, Texas, and conduct a general turpentine and resin enterprise, including all allied products of turpentine; Newton R. Wilson, president; Samuel Park, Beaumont, Texas, vice-president; Robert M. Hallowell, treasurer, and Louis Albert Murphy, secretary.

Fort Smith, Ark.—Choctaw Asphalt Co. Incorporated with \$100,000 capital stock by C. E. Speer, president; Thomas Bell, Thomas W. Clelland, Clifton R. Breckenridge and others.

Fort Worth, Texas—Manufacturing.—Fort Worth Manufacturing Co. incorporated with \$40,000 capital stock by W. G. Turner, W. E. Austin, N. H. Lassiter and others.

Gadsden, Ala.—Gas Plant.—Tri-City Gas Co. has awarded contract to the Laclede Fire Brick Co., St. Louis, Mo., at about \$10,000 for erection of producing furnaces.

Company was recently reported incorporated with \$150,000 capital stock to take over contract of Citizens' Gaslight & Fuel Co. and to erect gas plant to supply Gadsden, Alabama City and Attalla. Main building will be 75x150 feet and cost, with machinery, \$75,000; Henry C. Higgins, Dixon, Ill., president and general manager.

Haleyville, Ala.—Guano Factory.—A. J. Dane is interested in the establishment of guano factory.

Hancock, Md.—Cement, Brick and Tile Works.—Potomac Cement, Brick & Tile Co. organized with J. F. Fields president and J. W. Buzzard manager.

High Point, N. C.—Paper and Twine Plant. Parker Paper & Twine Co. incorporated with \$125,000 capital stock by W. T. Parker, J. Elwood Cox, J. H. Mills and others; paid-in capital of \$10,000 to start with; principal business to be jobbing paper and twine; may manufacture paper later. W. T. Parker will probably be secretary, treasurer and general manager.

Huntingdon, Tenn.—Concrete-block Factory.—Frank Watson will establish plant to manufacture concrete blocks used in laying sidewalks and for building purposes. Stock company will be formed later.

Jacksonville, Fla.—Cigar Factory.—Guy Cigar Co. incorporated with \$25,000 capital stock; Guy Secord, president; M. A. Secord, vice-president, and Thomas B. Livingstone, secretary-treasurer.

Jacksonville, Fla.—Grist Mill.—C. W. Bartheson Company will not install grist-mill equipment as recently incorrectly reported.

Knoxville, Tenn.—Feld & Dick contemplate establishment of plant for manufacture of denatured alcohol.*

Louisville, Ky.—Seltingen Steel & Cutlery Co. of Seltingen, Prussia, is reported as negotiating for purchase of site at \$80,000 on which to build a plant for the manufacture of cutlery, about \$200,000 to be expended on construction of buildings and installation of machinery for manufacturing. Thomas F. Coleman of A. T. Achranz & Co., Louisville, is said to be interested in locating the enterprise.

Monroe, N. C.—Cotton Goods.—Heath-Morrow Company incorporated with \$100,000 capital stock by R. A. Morrow, A. P. Heath, A. W. Heath and J. M. Morrow to deal in cotton goods.

Morristown, Tenn.—Soap Factory.—It is proposed to establish soap factory. T. C. Cain can give information.

Nashville, Tenn.—White Trunk & Bag Co. will rebuild plant reported burned July 18 at a loss of \$45,000. New factory will be three stories high, 300x60 feet, constructed of frame, ironclad. Private water and heating systems will be provided. Former will consist of tank 65 feet high with capacity of 30,000 gallons of water; pumping station capable of pumping 1000 gallons per minute, and reservoir with capacity of 100,000 gallons. Power-house will be used for both heat and water supply. About \$50,000 will be invested in building and equipment. It is expected that plant will be completed by November 1; J. A. G. Sloan, contractor.

Nashville, Tenn.—Phonograph Factory.—Harry Markle, H. E. Markle and others will organize and incorporate company to manufacture a new multiplex phonograph. Mr. Markle is now installing machinery at 403 Public Square.

New Orleans, La.—Shipbuilding.—New Orleans Yacht & Shipbuilding Co. organized to establish plant on Island in Bayou St. John for constructing yachts, motor boats, tugs and other craft from 150 feet down, and capable of repairing or building 10 to 12 boats at

one time. J. C. Feiliger, Jr., 320 Hennen Building, is interested.

Ocala, Fla.—Paving Material.—Woodman Sand & Stone Co. recently reported incorporated, will establish plant for the manufacture of artificial stone and brick paving material; president, J. R. Moorhead; secretary, David S. Woodrow.*

Okeene, O. T.—Roller Mills.—Okeene Roller Mills incorporated with \$25,000 capital stock by Edward Broom, Henry Buckingham and C. D. Boardman.

Oklahoma City, O. T.—Manufacturing.—Chickasaw Manufacturing Co. incorporated with \$100,000 capital stock by A. J. McMahan and D. B. Welty of Oklahoma City, Morton and J. Brorby, Chicago, Ill., and others.

Palestine, Texas—Creosoting Plant.—Geo. Burkitt is planning to install plant for creosoting railroad ties.

Rosenberg, Texas—Creamery.—E. Foerster is interested in contemplated establishment of creamery.*

Sapulpa, I. T.—Glass Works.—J. C. Madelen & Sons will establish glass factory. Company can be addressed care of Sapulpa Business Men's League.

Searcy, Ark.—Plow Factory.—Reported that a factory will be established to manufacture a plow recently patented by W. A. Dewberry.

Shelby, N. C.—Flour Mill.—Shelby Roller Mills, W. J. Reed, manager, will erect new plant with daily capacity of 100 barrels and operated by electricity. Stock company will soon organize with \$30,000 capital stock.

St. Louis, Mo.—Motor Vehicles.—Eureka Motor Buggy Co., 4500 Morgan street, recently reported incorporated, will engage in the manufacture of motor vehicles; capacity, two per day; N. D. Edington, president, secretary and treasurer.

St. Louis, Mo.—Glass Works.—Blankenmeister Glass Co. incorporated with \$35,000 capital stock by Ferdinand Blankenmeister, Arthur A. Blankenmeister and Edgar Blankenmeister.

St. Louis, Mo.—Smoke-preventing Company.—St. Louis Smoke Preventing Co. incorporated with \$50,000 capital stock by William J. Dougherty, Elmer P. Conkling, Isolda C. Dougherty, Frank Hoechstetler and others to install fuel-saving and smoke-preventing devices.

St. Louis, Mo.—Soap Factory.—H. H. Coleman Manufacturing & Mercantile Co., 518 Spruce street, recently reported incorporated, will establish factory for the manufacture of soaps and washing powders; manager, A. B. Ellison.

Tallahassee, Fla.—Tobacco Factory.—Gwynn Tobacco Co. incorporated with \$50,000 capital stock. F. C. Gilmore is president, C. B. Gwynn vice-president and general manager and G. H. Gwynn secretary-treasurer.

Terrell, Texas—Cement Works.—Olaf Johnson, president Brookings (S. D.) Cement Works, is reported as contemplating establishment of cement factory in Terrell.

ROAD AND STREET IMPROVEMENTS

Baltimore, Md.—Board of Awards.—City Hall, awarded contract to F. E. Schneider & Co., 332 Law Building, for paving Robert street from Whiteock street to Druid Hill avenue, and to P. Reddington & Sons, 321 St. Paul street, for paving Lombard street from Catherine street to Wilkins avenue. It also awarded contract to F. E. Schneider & Co. for footway on Patuxent street between Baltimore and Eastern avenue.

Baltimore, Md.—Board of Awards.—City Hall, will receive bids until August 28 for paving Chelsea terrace with macadam. Specifications can be obtained from Commissioners for Opening Streets, Hoan Building.*

Beaumont, Texas—Jefferson County Commissioners.—have voted to issue \$300,000 of bonds to build about 100 miles of shell roads. It is proposed to issue and sell \$100,000 of bonds by October 1 and make subsequent issues of \$50,000 every three months until the \$300,000 is issued.

Charleston, W. Va.—City Council.—has passed ordinance providing an issuance of \$65,000 of bonds for paving and curbing streets and construction of sewers, and \$5000 of bonds for repairing Brooks street. Address The Mayor. (Recently mentioned.)

De Land, Fla.—City.—will construct about 5000 linear feet of sidewalks or foot pavements, five feet wide. Bids will be opened September 9; E. D. McLeod, City Clerk.*

Elkins, W. Va.—City.—will pave 1270 feet on Harrison avenue and will open bids August 24; C. H. Scott, chairman street committee.*

El Reno, O. T.—City.—will open bids September 5 for construction of 38,913 square yards of vitrified brick pavement, with asphalt filler, to be laid on five-inch base of concrete;

also 492 linear feet of stone curbing. Address L. G. Adams, City Clerk.*

Fayetteville, Ark.—Road Improvement District No. 1 of Washington county.—has been organized and proposes to build 10 miles of macadam road.

Fernandina, Fla.—E. R. Conant.—has estimated for the city the cost of paving Centre street with vitrified brick at \$32,000. (Referred to July 11.)

Florence, Ala.—City.—will build cement sidewalks on Tennessee street, Royal avenue and Huntsville road. Bids will be opened September 3; J. B. White, City Clerk.*

Greeneville, Tenn.—Greene County Road Improvement Commissioners.—Henry R. Brown, chairman, will grade about 50 miles and macadamize or gravel about 40 miles of road; E. C. Brown, engineer in charge. Bids will be received until August 22. (Referred to July 11.)

Greenwood, S. C.—Wilson, Samparsac & Urquhardt.—engineers, Columbia, S. C., have been engaged to supervise the laying of vitrified-brick pavement at Greenwood, for which about \$40,000 will be expended.

Hattiesburg, Miss.—City.—will construct about 10,300 square feet of concrete work at Main and Court streets and Eaton schoolhouse lots and about 1250 square yards vitrified brick pavement. Bids will be opened August 26; J. H. Putnam, City Engineer.*

Lenoir, N. C.—Company.—is being organized to grade and macadamize road from Lenoir to Blowing Rock, N. C., a distance of 22 miles, at an estimated cost of \$65,000. Address County Commissioners.

Hopkinsville, Ky.—Christian County Commissioners.—have disposed of the \$100,000 of new turnpike road bonds and have appointed two committees—one to have charge of southern portion and other of northern portion of county—to advertise for bids for construction of 32 miles of roads in their respective sections. J. K. Twyman, civil engineer, will be in charge. (April 25.)

Johnson City, Tenn.—City.—will pave about 48,000 square yards of street surface with vitrified brick, bitumastic, asphalt, hessian or other material; about 22,000 square feet concrete sidewalk, 4600 linear feet concrete curbing and 4200 feet eight-inch vitrified sewer, with all necessary Ys, manholes, flush tanks, etc. Bids will be received by E. E. Ellsworth, Recorder, until September 5; L. N. Wilson, Jr., City Engineer.*

Middlesboro, Ky.—Horneck Construction Co.—R. Horneck, president, Asheville, N. C., has contract to construct Cumberland Gap roadway at 27 cents per cubic yard inside of city limits and 33 cents in Bell county. Bid was on approximately 12,000 cubic yards. Construction work will begin at once and be completed by November 15; J. H. Bartlett, chairman, Cumberland Gap road committee.

Montgomery, Ala.—City.—will pave sidewalks on both sides of Cramer avenue from McDonough to Decatur street with hexagon blocks or Schillinger pavement. Bids for same and all necessary granite curbing and storm-water sewers in connection therewith will be received by R. S. Williams, City Treasurer, until September 2.*

New Martinsville, W. Va.—City.—will construct 3000 yards of brick paving and 2000 feet of curbing. Bids will be opened August 31; Glen Snodgrass, Recorder; W. J. Alexander, City Engineer.*

Pine Bluff, Ark.—Hot Springs Concrete Co.—Hot Springs, Ark., has contract at about \$7200 for constructing 60,000 square feet of concrete sidewalks at Pine Bluff. (Referred to August 8.)

Rogersville, Tenn.—Hawkins county.—voted \$200,000 of bonds for road improvements. Address County Commissioners.

Tuscaloosa, Ala.—John Bigler, Bessemer, Ala., has contract at 88¢ cents per square yard for street paving.

SEWER CONSTRUCTION

Allian, Ga.—City.—will vote September 23 on the issuance of \$75,000 of bonds to complete system of surface drainage, extension of sanitary sewers and water mains into annexed territory, etc. Address The Mayor. See item under Water-Works.

Baltimore, Md.—Sewerage Commission.—904 American Building, Baltimore and South streets, will extend storm-water sewer on Lovegrove alley between Read and Madison streets, and on Pratt street between High street and Jones' Falls; cost about \$4600.

Camden, Ark.—B. C. Pauncey, Helena, Ark.—has contract at \$2600 to construct sewer system two miles long at Camden.

Charleston, W. Va.—City Council has passed ordinance providing an issuance of \$65,000 of bonds for paving and curbing streets and construction of sewers. Address The Mayor.

Gaffney, S. C.—City is considering installation of sewerage system. It is estimated that cost will be about \$100,000, as it will be necessary to increase water supply. Address The Mayor.

Honey Grove, Texas.—City is considering proposition of E. F. Elkin and associates to install sewerage plant.

Bogalusa, La.—Great Southern Lumber Co. (main offices in Ellict Square, Buffalo, N. Y.) will let contract about September 15 for construction of sewer system noted August 15 and previously; probable cost \$60,000; J. F. Coleman, chief engineer, 920 Hibernia Bank Building, New Orleans, La.

Waialua, S. C.—Oconee county will construct sewer system. Board of County Commissioners will open bids August 29; D. F. McAlister, Supervisor.*

TEXTILE MILLS

Athens, Ga.—Southern Manufacturing Co. will complete by December 1 its addition, of which details were stated in February. All contracts have been awarded, and the complete enlarged plant will have a total of 19,602 spindles and 400 looms, which is 3750 spindles and 216 looms more than announced previously.

Bowling Green, S. C.—J. S. Brice of Yorkville, S. C., states that recent report is not true stating he is interested in plans for building a knitting mill.

Cherryville, N. C.—Gaston Manufacturing Co. reported in March as to build additional mill, engaged Abeo & Edwards of Hickory, N. C., as architects in charge; construction now in progress on 77x243-foot building, in which 5000 spindles will be installed. Contract for machinery has been awarded; building to cost \$17,000, and machinery \$75,000.

Concord, N. C.—Franklin Cotton Mill's is reported as to build an additional mill, the equipment to be 12,000 spindles; present equipment is 7000 spindles.

Dallas, N. C.—W. S. Robinson, H. F. Forbes and associates are planning formation of company to build 5000 spindle cotton-yarn mill.

El Paso, Texas.—El Paso Chemical & Fiber Co. has purchased site and will erect plant for manufacturing rope, fiber, alcohol and other products from the cactus and other kindred plants, using a process originated by Dr. F. Thatcher. Company was reported in July as incorporated with capital stock of \$50,000 by A. C. Courchesne, W. W. Fink, L. Neil and others.

Flat Rock, N. C.—Skyland Hosiery Co. incorporated with capital stock of \$30,000 to knit hosiery by J. F. Wilcox and F. S. Wilcox of Lynn, N. C., and L. B. Stillwell of New York.

Florence, Ala.—Cherry Cotton Mills reported as having awarded contracts for roving, spinning and twisting machinery to replace wornout machinery in present plant; equipment is 11,000 spindles.

Fort Worth, Texas.—Farmers and Bankers' Warehouse Building Association is said to be planning the erection of a large cotton mill in North Fort Worth.

Hillsboro, Texas.—Hillsboro Cotton Mills will add 2500 spindles, 30 looms and complementary machinery additional to present plant of 2500 spindles and 80 looms. Company has contracted for new machinery needed except boiler, pulleys, shafting and some supplies. It will also erect cotton warehouse and tenement-houses.*

Huntsville, Ala.—Rowe Knitting Co. will hold meeting on August 22 to consider plans for reincorporating and increasing capital stock to double plant; present equipment, 5120 spindles and 40 knitting machines, etc. W. I. Wellman, general manager, is reported to have purchased control.

Inman, S. C.—The Inman Mills is reported as to build an additional cotton mill with an equipment of 20,000 spindles and accompanying looms; the mill building to be constructed to give a two-thirds glass wall; company's present equipment 18,336 spindles and 500 looms.

Kings Mountain, N. C.—Cora Cotton Mills, reported in May as contemplating erection of addition, will build another mill; materials for construction have been ordered, and it is understood the machinery has been contracted for; 10,000 spindles to be installed. Present equipment of company, 10,560 spindles.

Langdale, Ala.—West Point Manufacturing Co. of West Point, Ga., has engaged Charles

T. Main and John E. Porter of Boston, Mass., as engineers in charge of building and equipping water-power electrical plant to transmit 3000 horse-power by electricity for operating cotton-mill. This mill is the one announced by the Manufacturers' Record last month as to be built for 35,000 spindles and complement of looms. Company has awarded contracts for engineering, erection of buildings, installation of textile machinery, plans and specifications, etc., detailed previously. See item under Electric-Light and Power Plants.

Lenoir, N. C.—Moore Cotton Mill Co. has organized with F. P. Moore of Globe, N. C., president; J. V. McCall, vice-president; M. G. Shearer, secretary, and J. O. White, superintendent. It was reported in July as incorporated with capital stock of \$150,000 to build 5000 spindle cotton-mill; product 40 to 60s yarns.

Lincolnton, N. C.—Laboratory Cotton Mills will build an additional mill and has awarded contract to A. K. Loftin for construction of the building; to be two stories high, of brick, 80x100 feet. Present equipment of company, 5020 spindles.

Rock Hill, S. C.—Harris Manufacturing Co. has begun construction of two-story building, 75x140 feet, lower floor to be equipped for manufacturing coarse cotton yarns and upper floor for manufacturing collar pads. About \$50,000 to be invested. Wm. H. Harris is president. (Recently referred to.)

Shelby, N. C.—J. R. Dover, J. P. Deilinger, L. S. Hamrick and others will organize \$150,000 stock company to build mill for manufacturing blankets, quilts and several specialties.

St. Louis, Mo.—Corinth Woolen Mills will hold meeting on October 22 to consider increasing capital stock by \$100,000.

Union, S. C.—Union Cotton Mills reported as to purchase a large quantity of new machinery to replace wornout apparatus; present equipment, 35,600 spindles and 2400 looms.

Walnut Grove, N. C.—Recent report that Spray Cotton Mills of Spray, N. C., will build plant at Walnut Grove was erroneous.

Weldon, N. C.—Shaw Cotton Mills incorporated with capital stock of \$100,000 by W. T. Shaw, W. A. Pierce, A. C. House and W. E. Daniel.

West Point, Ga.—Lang Manufacturing Co. is reported as to install additional new machinery; present equipment, 3000 spindles and 30 looms.

Woodruff, S. C.—Gray Yarn Mills, W. H. Gray, president, has decided on erection of three-story mill building, 75x325 feet, to be equipped with 10,000 spindles and complementary apparatus for manufacturing Nos. 20 to 30 cotton yarns; contract awarded to C. R. Willard & Co. of Spartanburg, S. C., for construction of dam to develop power for operating the mill, and probably the energy will be transmitted by electricity. Gray Yarn Mills was reported organized, etc., last April with capital stock of \$175,000. J. E. Sirrine of Greenville, S. C., is architect-engineer in charge.

Yadkinville, N. C.—A. E. Holton, Jr., mentioned in July as proposing to form company to build knitting mill, has not decided definite plans, but will do so in the near future.

WATER-WORKS

Albany, Ga.—City will vote September 23 on the issuance of \$75,000 of bonds for municipal improvements, including extension of water mains and sewerage system. Address The Mayor. See item under Sewer Construction.

Arcadia, La.—City has engaged engineers from Mississippi to estimate cost and prepare plans and specifications for water-works. Special election will be held for voting tax. Address The Mayor. (Referred to August 8.)

Atlanta, Ga.—City Water Commissioners have recommended to Council purchase of eight additional 8x20-foot New York sectional wash filters for filtration plant, contract for which was recently noted awarded to New York Continental Jewell Filtration Co. (main offices 15 Broad street, New York, N. Y.)*

Bay City, Texas.—City will vote September 14 on the issuance of \$18,000 of bonds to construct water-works. Address The Mayor.

Berclair, Texas.—C. B. Lucas is considering installation of water-works.

Graham, Texas.—City has awarded contract to J. B. Hawley, Fort Worth, Texas, for construction of water-works. Plant will consist of five-foot dam across Salt creek, pumping station, two miles of six-inch mains and 100,000-gallon steel tower on summit of Twin Mountain.

Lebanon, Tenn.—Commercial Club is completing arrangements for proposed improve-

ments to water-works and has decided to obtain water from artesian wells to be sunk on Fox Hill. Plant, which will furnish 250,000 gallons of water every 24 hours, will be installed and work on reservoir will begin at once. Base of reservoir will be of solid rock and be eight and a half feet higher than present standpipe; H. K. Edgerton, chairman of committee. (Referred to July 25.)

McEwen, Tenn.—City is considering installation of water-works. Address The Mayor. Millen, Ga.—City will engage J. B. McCreary & Co., Atlanta, Ga., as engineers in charge of proposed electric-light plant and water-works; Mayor, H. Q. Bell. (Mentioned August 15.)

Mineral Wells, Texas.—City will vote September 6 on the issuance of \$10,000 of bonds for extending and improving water-works. Address The Mayor.

Oklahoma City, O. T.—City engineering department has decided upon general details for construction of water-softening plant for municipal water-works; softening capacity to be 50,000 gallons daily. Proposals are invited until August 31 for furnishing detailed plans and specifications and constructing the plant. W. X. Burke is City Engineer.*

Pavo, Ga.—City has voted bonds for construction of water-works. Address The Mayor. Pensacola, Fla.—Bureau of Yards and Docks, Navy Department, R. C. Hollyday, chief, Washington, D. C., will open bids September 7 for installation of water service. Royse City, Texas.—City will install water-works system, for which bond issue was recently reported voted; R. Z. Dyer, Mayor.*

Temple, Texas.—Negotiations between city and Temple Water-Works Co. have been declared ended, and citizens' committee has recommended to City Council that an election be held to vote on the issuance of \$150,000 of bonds to build municipal water-works. (Referred to previously.) Address The Mayor.

Walhalla, S. C.—Oconee county will construct water system. Board of County Commissioners will open bids August 29; D. F. McAlister, Supervisor.*

Wilson, N. C.—City has awarded contract to New York Continental Jewell Filtration Co. (main offices, 15 Broad street, New York, N. Y.) for filtration plant, consisting of two 8x20-foot New York sectional wash filters. Wilson, N. C.—City has awarded contract for filtration plant to Jewell Filtration Co. (main offices, 15 Broad street, New York, N. Y.). Plant will consist of two 8x20-foot New York sectional wash filters.

Tredegar, Ala.—Grist mill at Nesbit's Lake, owned by Anniston Lime & Stone Co., Anniston, Ala.; loss \$1500.

Tuscaloosa, Ala.—Tuscaloosa Cotton Mills; loss reported at \$300,000.

Ice & Cold Storage Co.'s ice plant, owned and operated by the Anheuser-Busch Brewing Co., St. Louis, Mo.; damaged at a loss of \$50,000.

Croton, Va.—Chewning & Dillard's excelsior mill at Cedar Forks.

Cumberland, Md.—Cumberland Steel Co.'s plant; loss \$350,000.

Dallas, Texas.—Armstrong Packing Co.'s lard refinery; loss on buildings and equipment \$57,000.

Enterprise, Miss.—City school building; loss \$6000. Address The Mayor.

Fernandina, Fla.—Seaboard Air Line Railway's phosphate elevators; loss about \$150,000; W. L. Seddon, chief engineer, Portsmouth, Va.

Garrett, Md.—John E. Brant's sawmill.

Lingo, Texas.—LaNana Lumber Co.'s sawmill; loss \$10,000.

Longview, Texas.—Morgan Lumber Co.'s mill at Easton; loss \$7000.

McAlester, I. T.—McAlester-Edwards Coal Co.'s tipple; loss \$12,000.

New Orleans, La.—Atlas Feed, Products & Milling Co.'s plant, owned by Wogan Bros.; loss about \$60,000.

Norman Park, Ga.—J. C. Norman & Co.'s sawmill; loss \$2000.

Pensacola, Fla.—Burke Bros.' bakery.

Pratt City, Ala.—Tennessee Coal, Iron & Railroad Co.'s tipple, pumphouse and new coal washer; loss \$75,000; general offices, Birmingham, Ala.; New York office, 100 Broadway.

Rock Bridge, Tenn.—Rock Bridge Tobacco Manufacturing Co.'s plant; loss \$1000.

Sample, Texas.—Piland's cotton gin; loss \$4000.

San Augustine, Texas.—Central Hotel; loss \$44,000.

Shelbyville, Tenn.—Robinson-McGill Manufacturing Co.'s plant; loss \$4000.

St. Louis, Mo.—St. Louis Hide & Tallow Co.'s plant; loss \$50,000.

St. Louis, Mo.—National Enameling & Stamping Co.'s plant, loss \$60,000; Moran Bolt & Nut Co.'s galvanizing plant, loss \$5000; Eve & Troug's Wire Co.'s plant, loss \$5000.

Sulphur Springs, Ark.—Sulphur Springs Lime Works; loss \$3000.

Tredegar, Ala.—Grist mill at Nesbit's Lake, owned by Anniston Lime & Stone Co., Anniston, Ala.; loss \$1500.

Tuscaloosa, Ala.—Tuscaloosa Cotton Mills; loss reported at \$300,000.

BUILDING NOTES

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Albany, Ga.—Building.—City will vote September 23 on the issuance of \$75,000 of bonds, portion of which will be used in erection of municipal building. Address The Mayor.

Allendale, S. C.—School Building.—J. H. Sams, Columbia, S. C., is preparing plans for erection of brick school building at Allendale to cost \$10,000.

Anniston, Ala.—Passenger Station.—Reported that Southern Railway is having plans prepared for erection of passenger station to cost \$75,000; D. W. Lum, Washington, D. C., chief engineer.

Ardmore, I. T.—Warehouse.—Western Storage Co. will be incorporated with \$25,000 capital stock by W. F. Whittington, W. R. Roberts, J. B. Sprague and others. Lately mentioned.

Asher, O. T.—Warehouse.—Farmers' Union Warehouse Co. incorporated with \$2500 capital stock by C. E. Hutcheson, J. T. McGuire, T. J. Ward and others.

Atlanta, Ga.—Residence.—Goodloe Yancey will erect two-story frame residence; architect, Pittman-Hayes Company; steam heat; gas and electric lighting; cost \$8000.

Atlanta, Ga.—Dwellings.—Nicholas Ittner has secured permit to erect two brick-veneer dwellings at a cost of \$7000 each.

Atlanta, Ga.—Residence.—W. P. Kelly & Co. have secured permit to erect two-story frame dwelling at a cost of \$21,600.

Augusta, Ga.—Fair Building.—Georgia-Carolina Fair Association, Frank E. Beane, secretary, has awarded contract to Charles McMurphy for erection of poultry building 70x100 feet.

Augusta, Ga.—Stockade.—C. A. Maxwell has submitted plans to Judge Wm. F. Eve for erection of Richmond County Stockade; two stories, with half-story basement; front, 85x26 feet; L projection, 85x41 feet; brick;

BURNED

Aberdeen, Md.—Aberdeen Hotel, owned by Robert Archer, Belair, Md.; loss \$4000.

Baltimore, Md.—Grotjan-Lobe Company's warehouse at 307 West Baltimore street; loss about \$15,000.

Baltimore, Md.—C. E. Eckenrode's carriage factory and stables at 16-18 North Carrollton avenue; loss about \$10,000.

Barr, S. C.—Smith Bros.' lumber plant; loss \$3500.

Baton Rouge, La.—Baton Rouge Artificial

metal roof; windows heavily grated; metal shutters; hot and cold baths; steam-heating apparatus; special ventilation windows.

Baden Mo.—Church.—Holy Cross congregation, 815 Church road, will erect edifice to cost about \$70,000; Rev. Peter Wigger, pastor.

Baltimore, Md.—Church.—J. F. Morgan, contractor, 1200 South Charles street, has contract to erect addition to Patterson Memorial Protestant Episcopal Church at Clement and Oliver streets, to cost about \$8000; Charles E. Cassell & Son, architects, 822 Law Building.

Baltimore, Md.—Office Building.—Consolidated Gas, Electric Light & Power Co., Lexington and Liberty streets, awarded contract to Harry H. Brown, 109 Clay street, for alterations in office building.

Baltimore, Md.—Laboratory and Greenhouse.—John Hiltz & Sons, 3 Clay street, and George A. Blake, 301 Law Building, are estimating on greenhouse and laboratory to be erected at Homewood for the Johns Hopkins University; laboratory to be one story, 24x24 feet; greenhouse to be 20x75.6 feet; Parker & Thomas, architects, Union Trust Building, Charles and Fayette streets.

Baltimore, Md.—Hall and Lodge Building.—Willis & Mason, 324 West Biddle street, and Fred Decker & Son, 1209 East Biddle street, are estimating on proposed hall and lodge building to be erected at Highland avenue and Baltimore street for Jonas Herman; Jacob F. Gerwig, architect, 11 East Lexington street.

Baltimore, Md.—Hospital.—Revised plans have been distributed for proposed Frank Memorial Hospital to be erected at Monument street and Hopkins avenue, to cost about \$80,000; estimating are J. Henry Miller, 106 Dover street; Charles L. Stockhausen, National Marine Bank Building, Gay and Water streets; Henry Smith & Sons Company, 116 South Regester street; Morrow Bros., 216 West Saratoga street; William Ferguson & Bro., 214 Clay street; Henry L. Maas, 906 Alsquith street; Joseph Schamberger, 2122 East Baltimore street; Louis Levi, architect, American Building, Baltimore and South streets.

Baltimore, Md.—Dwellings.—Jesse F. Hampton, contractor, 225 Lovegrove alley, will erect 11 two-story porch-front houses at Brady avenue and Frisby street.

Baltimore, Md.—Church Building.—Fourth Baptist Church, Joshua E. Wills, pastor, 504 North Broadway, will erect new church building to cost about \$25,000 on Broadway and McElderry street.

Baltimore, Md.—Truckhouse.—Board of Awards, City Hall, awarded contract to Milton C. Davis, contractor, 5 Hopkins place, to erect No. 15 truckhouse for fire department; cost about \$15,000.

Baltimore, Md.—School and Hall.—Henry S. Rippel, 7 Clay street; McIver & Piel, 2315 Edmondson avenue, and F. A. Klunk, 309 Jasper street, are estimating on proposed school and hall building to be erected for St. Benedict's Roman Catholic Church at Wilkens and Millington avenues, Rev. William Helm, pastor; structure will be three stories high, 59.6x18 feet; heating fixtures; sanitary plumbing; bowling alleys, classrooms, dining hall, library, etc., on first floor; auditorium and stage on second floor.

Baltimore, Md.—Dwellings.—McIver & Piel, contractors, 2315 Edmondson avenue, have secured permit to erect 50 two-story dwellings on Edmondson avenue, between Second and Fourth avenues, to cost about \$100,000.

Baltimore, Md.—Store, Hall and Lodge Building.—Jacob F. Gerwig, architect, 11 East Lexington street, has prepared plans for three-story building to be erected at Baltimore street and Highland avenue for Jonas Herman; structure will be 74x61 feet; lower floor to contain five stories, second floor dance hall and third floor lodge rooms; buff colored pressed brick with cut stone trimmings; heating and lighting fixtures; sanitary plumbing, etc.; cost about \$25,000.

Baltimore, Md.—Dwellings.—Elias A. Blackshear, 2452 Eutaw place, has awarded contract to James B. Yeatman, 4700 Park Heights avenue, for the construction of 28 two-story brick dwellings on Park Heights avenue. Electric wiring and fixtures, sanitary plumbing and steam-heating system will be installed.

Baltimore, Md.—Store Building.—It is reported that A. A. Brager, Eutaw and Saratoga streets, has commissioned C. M. Anderson, architect, 324 North Charles street, to prepare plans and specifications for six-story store building at 221-227 North Eutaw street.

Beaumont, Texas—Residence.—V. Weiss is having plans prepared for erection of residence; brick; two stories; cost about \$25,000. L. F. Daniels has surveyed site preparatory to beginning work on foundation.

Belhaven, N. C.—School.—City will build graded school, for which plans are being prepared by Stout & Benton, Rocky Mount, N. C.

Belhaven, N. C.—Residence.—J. A. Wilkinson will build residence. Stout & Benton, Rocky Mount, N. C., are preparing plans.

Belhaven, N. C.—Residence.—W. E. Stubbs will build residence after plans by Stout & Benton, Rocky Mount, N. C.; cost \$3000.

Benton, Texas—Courthouse.—Bell County Commissioners have adopted plans and specifications for repairing courthouse and will open bids September 9; estimated cost, \$4500.

Birmingham, Ala.—Business Building.—C. A. O'Neill of Cardiff, Ala., will erect business building recently mentioned; contractors, Carrogan & Lynn; architects, Wheelock, Joy & Wheelock; press brick and plate glass front; ordinary fireproof construction; 75x100 feet; gas and electric lighting; cost \$12,500.

Birmingham, Ala.—Hotels.—Union Land Co. has plans prepared for erection of two hotels; two stories; brick; cost, \$27,000 and \$14,000, respectively.

Bladenboro, N. C.—School Building.—City has voted \$5000 school-building bonds. Address the Mayor.

Bolivar, Tenn.—Warehouse.—Hardeman County Farmers' Union Warehouse Co. incorporated with \$10,000 capital stock by C. W. Fawcett, J. R. Casey, W. F. Dorris and others.

Brady, Texas—Church.—C. A. Trigg, secretary, will receive plans, specifications and bids or plans and specifications alone for stone church to cost about \$15,000. Bids will be opened August 27; usual rights reserved.

Brenham, Texas—School Building.—F. W. Wood has contract to erect school building 80x142 feet, 68 feet high; cost about \$30,000. Plans have been prepared by C. H. Page, Jr., & Bro., Austin, Texas; William Lusk, Mayor. (Referred to July 25.)

Brunswick, Md.—Business Building.—D. C. Winebrenner & Co., Frederick, Md., will erect business building; three stories, 30x100 feet; elevators; automatic sprinkler system; cost \$10,000.

Burnside, Ky.—Church.—Southern Methodist congregation has awarded contract to Geo. T. Hood & Co., Somerset, Ky., for erection of edifice to cost about \$7500.

Chandler, Texas—Bank Building.—W. F. Pinckard will erect bank building recently mentioned; cost \$4500; building to be 39x70 feet; architect and contractor, C. H. Hawn, Athens, Texas.

Charlotte, N. C.—Hotel.—Stonewall Hotel Co. incorporated with \$125,000 capital stock by J. M. Jamison, Norlina, N. C.; J. P. Saunders, E. I. Bugg and others of Greensboro, N. C.; will build hotel at cost of about \$60,000; 60x140 feet; architects, Frank P. Millburn & Co., Washington, D. C.; date for opening bids, about November 1; plans for building not decided. E. I. Bugg is secretary of company.

Charlotte, N. C.—Business Building.—First National Bank awarded contract to E. H. Overcash for erection of two-story brick building equipped with passenger and freight elevators, as an addition to the Frank D. Alexander Building, providing additional space for J. B. Ivey & Co.

Chestertown, Md.—Bank and Business Building.—Kent County Savings Bank, J. K. Aldridge, president, will erect bank and business building at a cost of \$12,000.

Concord, N. C.—Warehouse.—Cabarrus County Cotton Association (recently mentioned) will erect fireproof concrete and brick warehouse at cost of \$4000. John P. Allison is interested. Company will be organized August 24.

Cordelia, Ga.—Hotel.—Dave Browder is having plans prepared for erection of hotel; four stories; pressed brick, marble and stone; telephones; cost \$50,000.

Corrigan, Texas—School Building.—City has voted school bonds and special school tax. Address The Mayor.

Cross Hill, S. C.—School Building.—School Board will erect high-school building at cost of \$5000; 51x54 feet; cement block; hot-air heating; architect, D. G. Zeigler, Columbia, S. C.; contractor, John S. Reid, Newberry, S. C.

Cumberland, Md.—High-school Building.—Bids will be received until August 25 for erection of high-school building. Bids must be accompanied by certified check for \$500. Plans and specifications can be obtained from Geo. F. Sansbury, McCleave Building; usual rights reserved; A. C. Wilson, county superintendent.

Dalhart, Texas—School Building.—Dalhart independent school district will erect school building, for which bonds were recently re-

ported voted. W. B. Slaughter is president and J. S. Bailey secretary.

Dallas, Texas—Residence.—Mrs. Dr. Tribble, Waverly, Ill., is having plans prepared by Lang & Witchell of Dallas for erection of \$6500 residence on Junius Heights.

Dallas, Texas—Residence.—D. E. Waggoner is having plans prepared by Lang & Witchell for erection of residence in the Munger addition to cost \$10,000.

Dallas, Texas—Business Building.—H. H. Adams has secured permit to erect business building; two stories; brick; 50x100 feet; cost \$12,000.

Denmark, S. C.—Church.—Sealed proposals will be received by J. B. Traywick until August 28 for erection of brick church building; plans and specifications on file at Bank of Denmark and at office of Wilson, Sompayrac & Urquhart, Columbia, S. C.; usual rights reserved.

De Queen, Ark.—Jail.—Sevier county has appropriated \$4000 for erection of county jail; concrete; eight cells; James Steel, county judge. M. M. Jones, J. A. Wolford and others compose building committee.

El Paso, Texas—School Buildings.—Wm. Rheinheimer has contract at \$24,100 for erection of East El Paso school building, and C. D. Pollock at \$10,489 for erection of Highland Park school building.

El Paso, Texas—Courthouse.—County Commissioners have voted to expend \$25,000 in improvements to El Paso county courthouse. Plans and specifications will be submitted August 26.

Enterprise, Miss.—High-school Building.—City will rebuild high-school building recently burned at a loss of \$6000. Address The Mayor.

Estherwood, La.—School Building.—City has voted to levy a three-mill 10-year tax for erection of high-school building. Address The Mayor.

Eudowood (not a postoffice), Md.—Hospital.—Bids are being received for erection of addition to buildings at Eudowood to be used for advanced tuberculous patients; plans by Wyatt & Nolting, Keyser Building, Baltimore, Md. Building will consist of a central structure with several wings, dormitory being 23x79% feet. Henry S. Rippel, 7 Clay street, Baltimore, Md., is estimating on construction.

Ferriday, La.—Bank Building.—Wm. Stiedenroth, Natchez, Miss., has contract to erect bank building at Ferriday costing \$4500.

Fort Moultrie, S. C.—Government Building.—Office of Constructing Quartermaster. Sealed proposals, in triplicate, will be received until September 3 for erection of deadhouse. Plans, specifications and information furnished on application. United States reserves right to reject bids. Envelopes containing proposals should be endorsed "Proposals for Deadhouse," addressed to J. M. Fulton, constructing quartermaster.

Fort Sam Houston, Texas—Government Buildings.—Office Constructing Quartermaster, Fort Sam Houston, Texas.—Sealed proposals, in triplicate, will be received till September 12 for construction, plumbing and electric wiring of a deadhouse. United States reserves right to reject bids. Plans and specifications may be seen at this office. Sealed envelopes containing proposals should be marked "Proposals for Deadhouse," and addressed to L. J. Fleming, constructing quartermaster.

Gadsden, Ala.—Business Building.—Ewing Hardware Co.'s building, recently reported to be erected, will be of mill construction; 50x125 feet; three stories; steam heat; freight elevator; cost about \$17,000; bids to be opened about August 22; architect, A. D. Simpson.

Goldsboro, N. C.—Union Station.—E. B. Pleasants, chief engineer Atlantic Coast Line Railroad, Wilmington, N. C., will receive bids until August 28 for construction of union station at Goldsboro for the Goldsboro Union Station Co. Plans and specifications may be seen in office of E. Phenner, superintendent, Richmond, Va.; B. J. Hughes, superintendent, Norfolk, Va.; assistant engineer at Goldsboro, and E. B. Pleasants, chief engineer, Wilmington, N. C. Bids must be sent to E. B. Pleasants; usual rights reserved.

Great Bridge, Va.—School Building.—Board of Trustees, Pleasant Grove Public School District No. 3, Norfolk county, Virginia, will open bids at National Bank of Commerce Building, Norfolk, Va., August 24, for erection of one-story brick and slate roof school building at Great Bridge. Plans and specifications on file at above office or may be obtained from W. T. Zeppl, architect, Norfolk, Va. Certified check and bond (latter for two-thirds amount of contract) required.

Greensboro, N. C.—Sanitarium.—Dr. E. L. Stamey has purchased site 400x300 feet on which to erect sanitarium containing 40 rooms.

Greensburg, La.—School.—Greensburg school district will erect brick schoolhouse at cost of \$5000; fireproof; 50x50 feet; architect not selected. W. F. Holland may be addressed. (Mentioned recently.)

Greenville, S. C.—Cotton Platform.—Farmers' Union, W. C. Moore, president, has accepted proposition of Board of Trade to erect cotton platform 80x125 feet; C. O. Allen, chairman of committee.

Greenwood, Ark.—Bank Building.—Farmers' Bank, W. L. Seamans, president, Fort Smith, Ark., will erect bank building.

Grimesland, N. C.—Business Building.—J. O. Proctor & Bro. has awarded contract to C. B. West, Greenville, N. C., for two-story brick business building; cement and brick foundation; red-brick front laid in red mortar; four iron columns; tin roof; size 43x100 feet; cost \$5000.

Hamburg, Ark.—Hotel.—Mrs. H. A. Harris, Portland, Ark., will erect hotel in Hamburg at a cost of \$8000, replacing burned structure.

Hanceville, Ala.—Bank Building.—First National Bank, Hartselle, Ala., has awarded contract to W. L. and L. E. Jones for erection of bank building in Hanceville.

Hardy, Ark.—Warehouse.—Farmers' Union Warehouse & Supply Co. incorporated with \$10,000 capital stock. A. E. Horton is president, James C. Holt vice-president, W. M. Page secretary and G. W. Moore treasurer.

Hartwell, Ga.—School Building.—Winder Lumber Co., Winder, Ga., has contract to erect \$20,000 school building in Hartwell.

Hattiesburg, Miss.—Church.—R. E. Lee is preparing plans for erection of edifice for the Christian congregation. Structure will be of frame, veneered with brick; front of pressed brick and stucco; auditorium octagonal in shape, 44x44 feet; Rev. M. F. Harmon, visiting pastor.

Henning, Tenn.—Warehouse.—Henning Union Warehouse Co. incorporated with \$3000 capital stock by John D. Tarrant, W. J. Lankford, J. H. White and others.

Hightower, Mo.—Hotel.—Mrs. John W. Shatzier will rebuild Kirkwood Hotel, recently reported burned.

Hillshoro, Texas—Cotton Warehouse.—Hillshoro Farmers' Warehouse Co. has awarded contract to Tom Sowell for erection of brick cotton warehouse; 60x100 feet; storage capacity from 600 to 1000 bales.

Hillshoro, Texas—Warehouse, etc.—Hillshoro Cotton Mills will build cotton warehouse and 12 tenement-houses for operatives.

Hillshoro, Ala.—Warehouse.—Hillshoro Farmers' Union Warehouse Co. incorporated with \$5000 capital stock by R. F. Easton and others.

Hondo, Texas—Bank Building.—Hondo State Bank has awarded contract to Henry Schoenfeld, San Antonio, Texas, for erection of one-story bank building.

Huntsville, Texas—Warehouse.—Farmers' Union Warehouse Co. is being organized to build cotton warehouse costing about \$5000; building to be 100x125 feet, of corrugated galvanized iron; capacity about 3000 bales. G. A. Wynne and others are interested. J. H. Meyer of Houston, Texas, will probably be the architect.

Jackson, Mo.—Church.—Methodist Episcopal Congregation, South, Rev. M. T. Haw, pastor, will erect edifice; 70x118 feet; cost \$50,000; plans by Matthews & Clarke, Missouri Trust Building, St. Louis, Mo.

Jacksonville, Fla.—Residence.—Charles H. Howard has secured permit to erect two-story frame residence at a cost of \$5000.

Jacksonville, Fla.—Business Building.—A. C. Hartridge, Jacksonville, and R. H. Paul, Watertown, Fla., have let contract to W. T. Hadlow Company for erection of business building recently mentioned; mill construction; two stories; pressed brick; 140x90 feet; steam heat; electric lighting; cost \$35,000; plans by W. B. Tally.

Kansas City, Mo.—Garage.—Wm. E. Evans will erect motor-car garage.

Kansas City, Mo.—Church.—St. George's Episcopal congregation will erect edifice to cost about \$35,000. Address The Pastor.

Kansas City, Mo.—Hall.—Wyandotte Amusement Association will erect hall at West Side; 100x180 feet; seating capacity, 400; hardwood floor for dancing and roller skating; cost \$8000. Plans have been prepared by W. W. Rose and contract will soon be awarded.

Kissimmee, Fla.—Hotel.—Harry W. Thurman will convert business building into hotel; plans by W. Adams and Mr. Thurman; hotel to be 62x62 feet; three stories; open fireplaces; electric lighting; hand elevator;

laundry equipment; cost \$25,000; bids to be opened November 1.

Knoxville, Tenn.—Office Building.—Borchs, Wardrep & Co. were lowest bidders for erection of office building and warehouse for the International Harvester Co., to cost, when completed, about \$40,000. Structure will be of brick; four stories; 80x130 feet; red pressed-brick front; stone trimmings; slow-burning construction; two elevators; sprinkler system; two vaults; plans by Barber, Klutz & Graf. (Referred to August 1.)

La Porte, Texas—Hotel.—Company is being organized by Ingham S. Roberts, Houston, Texas, for erection of \$50,000 hotel at La Porte. Site consists of about five acres. Plans are being prepared by R. D. Steel, First National Bank Building, Houston, Texas.

Laurel Hill, Fla.—Warehouse.—Farmers' Union Warehouse Association, recently reported incorporated, will erect cement-block warehouse 50x100 feet; one story; cost \$1500; architect, Eric von Axelsson; contractors, Weston, Stokes & Nichols.

Little Rock, Ark.—School Building.—School Board has awarded contract to D. Krah at \$4800 for erection of two-room brick addition to Pulaski Heights school.

Lonaconing, Md.—Opera-house.—James Frew, Charleroi, Pa., and W. A. Hazlett, contractor, Connellsville, Pa., are considering erection of opera-house in Lonaconing.

Louisville, Ky.—Warehouse.—Southern Ve- neer Co., George F. Kretschmer, proprietor, has purchased site 40x180 feet; will erect storage warehouse at a cost of \$5000; offices at 124 2d street.

Lynchburg, Va.—Residence.—George P. Watkins will erect frame residence with slate roof at a cost of \$7500.

Magnolia, Miss.—Store Building.—S. Cohn & Sons will erect brick store building 28x44 feet, with plate-glass front. Contract has been awarded to Louis Lenoir.

Manchester, Va.—Dwellings.—O. D. Brinser will erect two dwellings; cost \$3000 to \$4500; 40x45 and 30x40 feet; electric-lighting fixtures; contractor, J. A. Clarke.

Marble Falls, Texas—Warehouse.—Farmers' Union Warehouse Co. is erecting \$1000 warehouse, 40x100 feet; plans by Monroe LaForge.

Marianna, Fla.—School Building.—Town Council will open bids September 13 for erection of \$20,000 high-school building; plans and specifications on file in office of W. A. McRae. J. C. Folson and Mr. McRae compose building committee.

Maysville, Ky.—Bank Building.—First National Bank has awarded contract to Alfred Struck Company, Louisville, Ky., for erection of bank building to cost \$75,000; architects, Richards, McCarty & Buiford, Columbus, Ohio; building to be 33x101 feet; five stories; fireproof; low-pressure steam heat, gas and electric lighting; electric elevators.

Maxton, N. C.—College Buildings.—Carolina Methodist College will erect administration building and two dormitories. Plans are being prepared by Stout & Benton, Rocky Mount, N. C.

McAlester, I. T.—Business Building.—Kress & Co. will erect business building.

Memphis, Tenn.—Business Building.—Oliver-Flinne Grocery Co. will rebuild structure reported burned August 1.

Memphis, Tenn.—Parsonage.—Central Methodist Church, Rev. William E. Thompson, pastor, will erect parsonage; two stories; stone veneer; eight rooms; slate roof; cost \$5000; East End Building Co., contractor.

Memphis, Tenn.—Residence.—E. B. McHenry is having plans prepared by Hunker & Cairns for erection of stone-veneered residence to cost \$12,000.

Memphis, Tenn.—Residence.—A. D. Armstrong is having plans prepared by Hunker & Cairns for erection of stone-veneered residence to cost \$12,000.

Memphis, Tenn.—Store Building.—Madison Improvement Co. has permit to erect building; three stories, 60x150 feet; brick; cost \$25,000; Hunker & Cairns, architects; C. J. Wagner, contractor.

Memphis, Tenn.—Warehouse.—C. J. Wagner & Co. have secured permit to erect three-story brick-and-stone storehouse at a cost of \$21,000.

Mineral Wells, Texas—Hotel.—Messrs. Baker and O'Neill will erect hotel to cost about \$400,000.

Montgomery, Ala.—Office Building.—N. J. Bell has awarded contract to the Wells Bros. Co., New York, N. Y., at about \$400,000, for erection of proposed office building: 12 stories with basement and attic; 100x100 feet; steel, brick and stone; fireproof; contain 306 offices; plate glass, marble mosaic and tile work; gas and electricity; plumb-

ing. Contract does not include three elevators and electric wiring, which contracts will be awarded later; estimated that completed cost will be about \$450,000. (Referred to July 25.)

Monticello, Ark.—Church.—Associate Reformed Presbyterian Church will erect edifice; pressed-brick exterior; seating capacity about 600; Wilson & Hendrix, Pine Bluff, Ark., contractors.

Montrose, Ala.—Hotel.—A. S. Lyons, Richard Murry and L. Hammel of Mobile, Ala., and W. W. Thompson, Davenport, Iowa, will organize company to build summer and winter hotel at Montrose and establish 45-minute steamboat schedule between Mobile and Montrose.

Morrillstown, Tenn.—School Building.—Morrillstown Normal and Industrial College will erect school building at a cost of \$20,000; Dr. J. S. Hill, president.

Nashville, Tenn.—Business Building.—T. S. Weaver will secure permit to enlarge and remodel building at a cost of \$12,600.

New Orleans, La.—Building.—Cahn & Wackenheim have permit for remodeling of building at a cost of \$8000.

New Orleans, La.—Building.—B. May has secured permit to erect frame addition to building at a cost of \$6000.

New Orleans, La.—Residence.—John G. O'Kelly has secured permit to erect two-story frame dwelling at a cost of \$10,000.

New Orleans, La.—Shed.—Louisiana Rail-way & Navigation Co. has secured permit to erect frame shed at a cost of \$6000.

New Orleans, La.—Residence.—Mrs. Lewis Goldstein will erect two-story frame dwelling to cost \$7000.

New Orleans, La.—University Buildings.—Tulane University has authorized Andry & Bendersnagle to prepare plans and specifications for erection of the Richardson Memorial Building; stone; cost about \$150,000. Same architects will prepare plans and specifications for enlargement of chemical building; cost \$50,000; building will be known as the Richardson-Tulane Chemical Institute. DeBuys, Churchill & Labouisse will prepare plans and specifications for erection of the Richardson memorial dormitory, to be constructed with a view of future enlargement. Total cost will be about \$200,000; Joseph A. Hincks, secretary. (Referred to June 29.)

Oakland City (P. O. Atlanta), Ga.—Church.—Baptist congregation will erect edifice to cost about \$5000; A. P. Morgan, chairman, and A. N. Jenkins, secretary of committee in charge.

Oklahoma City, O. T.—Depots.—Chicago, Rock Island & Pacific Railway, J. B. Berry, chief engineer, Chicago, Ill., and the St. Louis & San Francisco Railroad, J. F. Hinckley, chief engineer, St. Louis, Mo., are reported to erect union and freight and passenger depots.

Palestine, Texas—Fire Station.—Plans are being prepared for erection of fire station; brick; two stories; cost \$10,000. Address The Mayor.

Palestine, Texas—Residence.—Albert Mauer has purchased site at \$1500 on which to erect residence.

Parkersburg, W. Va.—Residence.—J. W. Roberts will erect double residence; two and one-half stories; pressed brick with white marble joints; stone foundation and trimmings; bathrooms in each house finished in tile; J. H. Daniels, contractor.

Pensacola, Fla.—Hotel.—F. C. Brent will make improvements to hotel as recently noted; one-story building, 40x120 feet, will be erected for steam laundry; 76-foot extension will be made to hotel; cost of improvements, \$16,500.

Pensacola, Fla.—Navy-yard Buildings.—Sealed proposals endorsed "Proposals for Locomotive Shed and Paint Shop" will be received at Bureau of Yards and Docks, Navy Department, Washington, until September 14 for constructing two brick buildings at navy-yard, Pensacola, Fla. Plans and specifications can be obtained at bureau or from commandant of navy-yard named: R. C. Hollyday, chief of Bureau.

Piedmont, Ala.—Warehouse.—J. J. Eubanks has contract to erect Farmers' Union warehouse; one story, 50x150 feet.

Pine Bluff, Ark.—Wharf.—W. J. Parkes, City Engineer, has submitted plan to public works committee of Board of Trade for construction of proposed wharf and estimated cost of structure, 350x75 feet, at between \$4000 and \$5000. Arkansas River Packet Co. will pay half of cost. (Referred to August 15.)

Pocahontas, Ark.—Depot.—Reported that St. Louis & San Francisco Railroad, J. F. Hinckley, chief engineer, St. Louis, Mo., will erect depot at Pocahontas.

Prescott, Ark.—Warehouse.—Farmers' Union Warehouse Co. has awarded contract to Crossbelle & Caulder, Hope, Ark., at \$5026 for erection of cotton warehouse; 134x150 feet; architect, J. M. Thomas, Emmet, Ark.; W. C. Jones, R. F. D. No. 2, president of union. (Referred to August 15.)

Quanah, Texas—School Building.—Date for awarding contract for erection of school building has been postponed to August 26; certified check, \$500; M. M. Hankins, secretary of School Board. (Referred to August 8.)

Richmond, Va.—Warehouse.—Warner Moore and Clement Jones, trustees of the Anderson estate, have secured permit to erect warehouse; three stories with basement; cost about \$9000; brick; mill construction; electric and gas lighting; \$3000 electric elevator; bids opened August 18.

Rock Hill, S. C.—Dwelling.—C. M. Kuykendall will erect dwelling to cost \$3000; plans by Hugh E. White.

Rock Hill, S. C.—Dwelling.—R. A. Beall will erect dwelling after plans by Hugh E. White; cost \$400.

Rock Hill, S. C.—Dwelling.—C. E. Coker will erect dwelling to cost \$3500; plans by Hugh E. White.

Rocky Mount, N. C.—Hotel.—Bland, Tillary & Ricks are having plans prepared by Leitner & Wilkins, Wilmington, N. C., for erection of hotel; 80 rooms, all with bath; cost \$50,000.

Rocky Mount, N. C.—Residence.—L. D. Bullock will build residence to cost \$4500. Plans are being prepared by Stout & Benton.

Rocky Mount, N. C.—Residence.—John D. Bullock will build residence after plans by Stout & Benton; cost \$10,000.

Rocky Mount, N. C.—Residence.—T. J. Hackney will build residence after plans by Stout & Benton; cost \$20,000.

Rocky Mount, N. C.—Residence.—L. C. Levy will build residence to cost \$8000. Stout & Benton are preparing plans.

Runge, Texas—Cotton Warehouse.—Karnes County Warehouse Co. has decided upon plans for erection of cotton warehouse with capacity of 1500 bales of cotton; corrugated-iron construction; cost \$2500; architect, Farmers and Bankers' Building Association of Fort Worth, Texas.

San Angelo, Texas—City Hall.—City has voted \$20,000 of bonds, portion of which will be used in erection of city hall. Address The Mayor.

Savannah, Ga.—Wharf.—Granger & Lewis will build lumber wharf on Hutchinson's island; dock will cover about nine acres, with water frontage of 750 feet. Work of dredging and deepening river in front of dock will begin within a few days, and it is estimated that total cost will be about \$100,000.

Selma, Ala.—Postoffice Building.—Treasury Department, office of supervising architect, Washington, D. C., August 19. Sealed proposals will be received at this office until September 30 for construction (including plumbing, gaspiping, heating apparatus, electric conduits and wiring) of United States postoffice at Selma in accordance with drawings and specifications, copies of which may be had at the office of the custodian of site at Selma or at this office at discretion of supervising architect; James Knox Taylor, supervising architect.

Sikeston, Mo.—City Hall and Jail.—City has had plans prepared by Matthews & Clarke, Missouri Trust Building, St. Louis, Mo., for City Hall and jail; two stories; 60x80 feet; brick and stone; cost \$30,000; Dr. E. J. Malone, Mayor.

Smithville, Texas—Warehouse, Roundhouse, etc.—Missouri, Kansas & Texas Railway will build addition to iron warehouse, stone and cement oilhouse and install several stalls in roundhouse; S. B. Fisher, St. Louis, Mo., supervising engineer.

Spray, N. C.—Warehouse.—The Consolidated Company is building cotton warehouse.

St. Joseph, Mo.—Hotel.—Selden-Breck Construction Co., St. Louis, Mo., has contract to erect hotel in St. Joseph for Isle Bros., Memphis, Tenn. Structure will be nine stories high, of steel construction, fireproof, and cost about \$425,000.

St. Louis, Mo.—Apartment-house.—M. Cohen will erect apartment-house; plans by J. D. Paulus, Lacled Building; to be two stories high, 75x75 feet; cost \$20,000.

St. Louis, Mo.—Apartment-house.—Mrs. Delta Epstein, care of E. L. Maule, Jr., architect, Chemical Building, will erect apartment building; three stories; 57x57 feet; brick and stone; steam heat; cost \$20,000.

St. Louis, Mo.—Clubhouse.—T. C. Link, Carleton Building, has prepared plans for

clubhouse; one story and basement, 100x125 feet; brick and stone; cost \$50,000; Mrs. A. L. Shopleigh, president of lodge, 3636 Delmar boulevard.

St. Louis, Mo.—Hall.—Knights of Columbus are having plans prepared by Baker & Knell, Odd Fellows Building, for erection of lodge hall; four stories; 75x146 feet; brick and stone; cost \$125,000.

St. Louis, Mo.—Livery Stable.—H. W. Powers, 620 Chestnut street, is preparing plans for livery stable; two stories; brick and stone; cost \$20,000.

St. Louis, Mo.—Mercantile Building.—W. W. Candy will erect mercantile building; five stories; 60x80 feet; brick and stone; cost \$100,000. Plans are being prepared by G. W. Helmuth and L. Spierling, Equitable Building.

St. Louis, Mo.—Residence.—A. V. Ferry will erect residence; brick and stone; cost \$70,000. Plans prepared by Leonard Haeger, 2853 South 13th street. Bids received by George Bergfeld, 109 North 9th street.

St. Louis, Mo.—Store and Apartment-house.—J. L. Wees is preparing plans for store and apartment building at Taylor and Chouteau avenues; two stories; brick and stone; gas and electricity; cost \$15,000.

St. Louis, Mo.—Store and Apartment-house.—Genla Realty Co. is having plans prepared by William Wedemeyer, Wright Building, for store and apartment-house; two stories; 110x56 feet; steam heat; cost \$40,000.

St. Louis, Mo.—Warehouse.—American Manufacturing Co. will add three stories to four-story warehouse, 35x65 feet; cost \$25,000; E. C. Klipstein, Security Building, architect.

Sulphur, I. T.—Hotel.—Mr. Reece, Mineral Wells, Texas, has purchased site at \$3500 on which to erect four-story hotel with private baths.

Sulphur, I. T.—Apartment-house.—J. F. Tribble, Fort Worth, Texas, has purchased site with frontage of 161 feet on which to erect apartment-house.

Tallapoosa, Ga.—Business Building.—G. W. and J. C. Tumlin will erect concrete building to replace burned structure.

Tarboro, N. C.—Residence.—W. A. Hart will erect \$6000 residence after plans by Stout & Benton, Rocky Mount, N. C.

Taylor, Texas—Warehouse.—Sturgis-Goldstein Company's warehouse, recently mentioned, will be erected at cost of \$8000; architect, H. Struve; brick construction; one story; 54x125 feet; electric lighting; bids to be opened soon.

Texarkana, Ark.—Passenger Station.—St. Louis Southwestern Railway is reported to build brick passenger depot; M. L. Lynch, chief engineer, Tyler, Texas.

Thomasville, N. C.—Infirmary.—Thomasville Baptist Orphanage is having plans prepared by J. H. Hopkins, National Bank Building, Greensboro, N. C., for erection of proposed infirmary; two stories; brick; basement under one wing; 22 wards, five baths, lavatory, etc.; hot-water or steam heat; complete sewerage system; electric and gas fixtures; cost \$10,000; no contract to be let; work to be done by M. L. Kesler, general manager.*

Uvalde, Texas—School Building.—Bids will be received until August 30 for erection of school building according to plans on file in office of G. B. Fenley, president School Board of Trustees at Uvalde and office of A. O. Watson, architect, Austin, Texas; certified check, \$500. (Referred to August 8.)

Van Buren, Ark.—Residence.—Dr. Giles Lunsford will erect residence; brick; colonial style; 10 rooms, bathrooms, etc.; A. M. Kelly, contractor.

West Point, Ga.—Warehouse.—Lang Manufacturing Co. is reported as to build cotton warehouse.

Westport, Mo.—High-school Building.—Forrester-Swenson Construction Co., Kansas City, Mo., has contract at \$242,951.50 to erect high-school building at Westport.

Whitakers, N. C.—Residence.—J. C. Braswell will erect \$5000 residence after plans by Stout & Benton, Rocky Mount, N. C.

Winnabow, S. C.—Office and Store Building.—Enterprise Building Association has awarded contract to J. J. Caine, Columbia, S. C., for erection of office and store building; three stories; brick; steam heat; electricity; cost \$25,000. Plans have been prepared by Hamby & Hamby, Columbia, S. C.

Winnabow, S. C.—Business Building.—M. W. Doty has awarded contract to John J. Caine, Columbia, S. C., at \$18,100, for erection of three-story building, replacing burned structure.

RAILROAD CONSTRUCTION

RAILWAYS

Artemus, Ky.—The Cumberland Railroad Co. has, it is reported, transferred its headquarters from Warren, Pa., to Artemus. The line is 12 miles long, and an extension of 27 miles to Jellico, Tenn., is now being built. F. F. Whittekin is general manager and chief engineer.

Baltimore, Md.—The Washington, Baltimore & Annapolis Electric Railway will, it is announced, probably be in operation by November 1 at the present rate of progress. George T. Bishop is president.

Baton Rouge, La.—Scott & Ogden, contractors of Baton Rouge, have, it is reported, been awarded an additional contract for grading on the Baton Rouge, Hammond & Eastern Railway from Hammond, La., toward Covington.

Beaumont, Texas.—Concerning the report that the Gulf, Colorado & Santa Fe Railway would build new yard tracks and team tracks, an official informs the Manufacturers' Record that the work consists simply of some changes in the existing trackage.

Biloxi, Miss.—An official of the Biloxi & Great Northern Railroad Co. is reported as saying that rights of way are mostly secured for its proposed line from Biloxi to connect with the Mobile & Ohio Railroad, probably at Bucatunna, about 100 miles. W. K. M. Duke is president, J. B. Chinn vice-president, W. Gorenflo treasurer and I. Heidenheim secretary. W. L. Covel is chief engineer.

Canton, N. C.—Mr. Charles S. Bryant, treasurer of the Champion Fiber Co., writes to the Manufacturers' Record denying the report that the company was interested in an electric railway project from Waynesville to Canton.

Caro, Texas.—The Caro Northern Railway Co. writes the Manufacturers' Record denying the press report that it proposes to build an extension of about 18 miles, and saying, furthermore, that no extensions are contemplated at present. The Whiteman & Decker Lumber Co. is reported interested.

Carrizo Springs, Texas.—D. J. Woodward of San Antonio is reported to be backing a plan to build an electric railway from Cotulla to Carrizo Springs.

Carrollton, Ala.—President John T. Cochran of the Alabama, Tennessee & Northern Railroad is reported as saying that the line will be completed to Cochrane, Ala., in time to handle this season's crops. B. H. Hardaway of Columbus, Ga., has the contract for the bridge over the Tombigbee river. William Toxey is chief engineer for the company.

Chickasha, I. T.—Officials of the Oklahoma Central Railroad are quoted as saying that the line will be completed into Chickasha within a month. Grade is all finished and track is laid to Blanchard, leaving 25 miles yet to lay. Dorset Carter is president and F. C. Hand is chief engineer of construction at Purcell, I. T.

Cleveland, Texas.—R. C. Wilcox of the Kirby Lumber Co. is reported as saying that it is building a tramroad from Cleveland 25 miles to Tarpington bayou.

Columbus, Miss.—The bond election on August 1 which voted \$50,000 in aid of the Columbus, Memphis & Pensacola Railroad was, it is reported, illegal for lack of a sufficient percentage of the total vote, and another election is to be held.

Cumnock, N. C.—E. W. Shedd of Cartage, N. C., has, it is reported, bought the Raleigh & Western Railroad, eight miles long, from Colon to Cumnock, and which has a grade from Cumnock to Harper's Cross-Roads. Mr. Shedd is chairman of the board of the Randolph & Cumberland Railroad, and it is reported that the newly-purchased line will be extended.

Dallas, Texas.—The Dallas Interurban Railway Co., which proposes to build a line from Dallas to Greenville, has, it is reported, started construction in Dallas. D. E. Waggoner is president and J. Mercer Carter and others are directors.

Danville, Ky.—The Danville & Scottsville Railroad Co. is reported to have begun work at Scottsville, whence the line is to run via Liberty, Hustonville and Moreland to Danville. It is said the line will build from Scottsville to connect with a through line to Savannah, Ga. J. S. Allen of New York is president, E. P. Combes of the same city vice-president, M. J. Farris of Danville treasurer, and A. E. Hundley, also of Danville, secretary. Mr. Farris is president of the Citizens' Bank.

Decatur, Ala.—The Alabama Western Railroad Co., which proposes to build a line from Tuscaloosa to Gadsden, Ala., via Falk-

ville, 18 miles south of Decatur, has made partial survey, and construction is expected to begin within a year. S. E. Gardner of Landersville is president and J. C. Kumpf of Moulton is first vice-president.

Edgeville, S. C.—Mr. B. E. Nicholson, attorney-at-law, writes the Manufacturers' Record that definite plans have not yet been made for the proposed electric railway from Edgefield to Plum Branch, Greenwood, Saluda, Newberry and Augusta. A committee has been appointed and it is to meet on August 22 to take more definite action.

Fairmont, W. Va.—President T. W. Fleming of the Fairmont & Mannington Railroad writes the Manufacturers' Record that there is nothing at present in the report that this electric line will be extended to Smithfield and New Martinsville, and also that there may not be for a long time.

Farmerville, La.—This town has voted a five-mill tax in aid of the proposed Monroe, Farmerville & Northwestern Railroad.

Fayetteville, N. C.—Mr. William Moncure, general manager and engineer of the proposed Bladen & Northern Railroad, is quoted as saying that construction will be underway on the first 20 miles within two months. This will be from Stedman to White Oak, N. C.

Fort Worth, Texas.—The Missouri, Kansas & Texas Railway is reported to have begun construction upon its new terminal in Fort Worth.

Fort Worth, Texas.—Reported that contract has been signed by Maj. J. G. Beardsley of Mineral Wells and E. W. Barrows, secretary and treasurer of the American Engineering Co. of Indianapolis, for the beginning of construction on the Fort Worth & Mineral Wells Interurban Electric Railway within two weeks. It is expected to have the road in operation next spring.

Fort Worth, Texas.—M. C. Davis, engineer for the electric interurban project of Gideon R. Turner of New Orleans, is preparing a force to make the final survey between Fort Worth and Mineral Wells, Texas, about 50 miles. Later—Survey has begun.

Hereford, Texas.—Grading is reported completed on the Panhandle Short Line Railroad from Hereford to Dimmit, and construction is under way from there to Lubbock and Stanton, Texas.

Houston, Texas.—Mr. C. M. Malone, auditor of the Houston Belt & Terminal Railway Co., writes the Manufacturers' Record confirming the report that it has filed a mortgage for \$5,000,000 securing bonds to build its belt line and terminals. Construction is to be pushed. P. G. Burns is engineer in charge; address, Fort Worth, Texas.

Johnson Stand, Tenn.—President W. W. Wood of the Fentress County Railroad Co., Jamestown, Tenn., writes the Manufacturers' Record that the election in Fentress county to vote on the proposition to take \$50,000 of stock in the line will be held about September 15. The proposed route, as heretofore reported, is from Johnson Stand via Jamestown, Tenn., to Monticello, Ky.

Lake Charles, La.—It is announced that the Lake Charles & Northern Railroad has been completed between De Ridder and Fulton, La., 25 miles, and that construction is progressing from Fulton to Lake Charles. J. A. Bel of Lake Charles is vice-president and George W. Nott of New Orleans is president of the road, being also president of the Citizens' Bank of that city.

Leesville, La.—President C. C. Henshaw of the Central Railway of Louisiana, at New Iberia, is reported as saying that construction will be resumed on the line, which is to be used by the Kansas City Southern Railroad, as soon as money conditions improve, which may be early this fall. About 20 miles of grade were completed by Walter Myrick of Beaumont, Texas, and this will be used as a part of the new line.

Lookout, W. Va.—The Loop & Lookout Railroad Co. will, it is reported, build a railroad from Lookout in Fayette county to Glencoe in Greenbrier county; principal office at Evenwood, Randolph county; authorized capital, \$100,000. The incorporators are T. W. Raine, W. W. Raine, L. R. T. Preysz, J. M. Raine and S. J. Snyder, all of Evenwood.

Marksville, La.—The Louisiana Railway & Navigation Co., it is reported, has under consideration a proposal to build a five-mile branch from Hessmer to Marksview, D. C. Fenstermaker is chief engineer at Shreveport, La.

McAlester, I. T.—The McAlester Southwestern Railway Co., capital \$500,000, has, it is reported, been granted a charter in Oklahoma to build a line from Sallisaw on the Iron Mountain road to McAlester, and thence to and through Comanche county, Okla.

O. T., to a point on the Red river, 250 miles. The incorporators include C. W. Dawley, E. N. Allen and A. S. McKenna of McAlester, J. N. Graves and A. S. Connolley of Oklahoma City.

Memphis, Tenn.—A franchise has been granted to the Frisco system to build tracks over several pieces of property and streets to serve the plant of the Gulf Compress Co., J. F. Hinckley is chief engineer at St. Louis.

Merkel, Texas.—The Canadian & Gulf Railway Co. is reported to have revived its plan to build 400 or 500 miles of line. L. R. Porter of Merkel may be able to give information.

Morehead, Ky.—The Clearfield Lumber Co., Clearfield, Pa., informs the Manufacturers' Record that the Morehead & North Fork Railroad is to be extended about 18 miles to the head of the north fork of Licking river to develop its Kentucky lands. The Snyder Construction Co., Inc., has the contract. E. W. Hess of Clearfield, Pa., is chief engineer.

Paducah, Ky.—The Southern Electric Railroad Co., which proposes to build an interurban line through the western part of Kentucky, has elected W. A. Martin president, H. H. Loving secretary and general manager, and W. B. Scott treasurer; capital stock \$1,000,000. The contract is awarded to the Southern Construction Co. The officers are J. F. Harth, president; H. H. Loving, secretary, and W. B. Scott, treasurer.

Pensacola, Fla.—The Interstate Contract Co., 224 Brent Building, has again asked for bids to build 85 miles of line for the Pensacola, Alabama & Western Railroad from Pensacola, Fla., to Andalusia, Ala., and also for 20 miles of line on the Atmore division of the same road; bids to be opened September 5.

Port Arthur, Texas.—The Gulf, Colorado & Santa Fe Railway has, it is reported, purchased a terminal site in Port Arthur and will build line from Beaumont. C. F. W. Felt is chief engineer at Galveston, Texas.

Pawhuska, O. T.—J. H. Brewster, general manager of the proposed Cherryvale, Oklahoma & Texas Railroad, Independence, Kan., is quoted as saying that survey has been made for 250 miles and right of way is partly obtained, but it is not yet decided when bids will be received and contracts let. J. B. Paulson of Lawrence, Kan., is chief engineer.

Pawhuska, O. T.—John A. Griesel, secretary of the Farmers and Merchants' Industrial Club, Golden City, Mo., is reported as saying that the Oklahoma & Golden City Railway Co. will award contracts when surveys are finished, probably in November. Line to run from Pawhuska, O. T., to Jefferson City and Springfield, Mo., 340 miles, with several branches to oil, timber and mining regions in Oklahoma and Missouri. W. K. Palmer is chief engineer, Dwight Building, Kansas City, Mo.

Russellville, Ark.—An official of the Russellville & Ozark Mountain Traction, Light & Power Co. is reported as saying that it will build a line 10½ miles long from Russellville to Dover, Ark. Surveys made and right of way obtained. Edwin Cook of Pine Bluff, Ark., is chief engineer.

Sedalia, S. C.—L. J. Browning of Sedalia is reported to be promoting a plan to build a railroad about 60 miles long from Whitmire via Sedalia, Cross Keys, Cross Anchor, Holbyville, Woodruff, Ashville and Reidville to Greer, S. C., by way of the old Blackstock road.

Shreveport, La.—The Louisiana & Arkansas Railway is reported to have closed a deal for part ownership in the Shreveport Northeastern Railway, which is being built by A. K. Clingman and others from Shreveport to Minden and Homer, La. Another report says contract is let to R. B. Pace to clear right of way for an extension to Shreveport, about 15 miles.

Sour Lake, Texas.—With reference to the report that L. F. Daniel was surveying for a 10-mile tramroad extension for the Thompson-Ford Lumber Co., Mr. A. C. Ford, president of the Frisco Lumber Co., writes the Manufacturers' Record saying that the road is a standard-gauge logging line and the contemplated extension is about seven miles, while of this three miles are about completed.

Statesville, N. C.—Survey for the Statesville Air Line Railroad is reported begun by R. L. Greenlee of Marion, N. C., chief engineer.

Sweetwater, Texas.—The Kansas City, Mexico & Orient Railway, now operating 78 miles of line between Sweetwater and Knox City, will, it is reported, soon open the extension to Benjamin, 12 miles. From San Angelo northward seven miles of track have been laid, and work is continuing toward Sweetwater. Construction is also progressing between Benjamin, Texas, and Clinton, O. T.

Tremont, La.—The extension of the Tremont & Gulf Railroad will, it is said, be continued to Rochelle, La., to be completed within 60 days.

Tulsa, I. T.—J. Robert Burnham, chief engineer for the Mid-Continent Traction Co. of Tulsa, is quoted as saying that survey has begun and rights of way partly secured for a line 21 miles long from Tulsa to Red Fork, Sapulpa and the Glen Pool oil field. No contracts let as yet. F. L. Smart of Kansas City, Mo., is president and Graham Burnham is secretary at Tulsa.

Weston, W. Va.—The Weston Lumber Co. is reported to have extended the Cody Railroad from Bean's Mill to timber lands, one and one-quarter miles, making the line four and one-half miles long.

Wichita Falls, Texas.—Stockholders of the Wichita Falls & Northwestern Railroad are reported to have voted an issue of \$20,000 of bonds per mile to complete the Red River division into Frederick, O. T., 32 miles, from Altus, O. T.

Wichita Falls, Texas.—The Wichita Falls & Southern Railway is reported to have completed 22 miles of grade from Wichita Falls to Archer, and construction is under way for 18 miles farther to Olney, Texas. Survey has been made also 15 miles beyond Olney to Fort Belknap. Line is to run to Cisco, Texas. J. W. Field is chief engineer and J. A. Owens is contractor. J. A. Kemp is president and Frank Kell is vice-president and general manager.

Wilmington, N. C.—F. B. Pusey and A. J. Fahnestock of Philadelphia have, it is reported, completed survey for the Cape Fear, Southport & Atlantic Railroad between Wilmington and Southport and the South Carolina boundary.

STREET RAILWAYS

Austin, Texas.—The Austin Street Railway Co. is reported preparing to build an extension to the Austin dam, more than a mile.

Brunswick, Ga.—The City & Suburban Railway Co. has published its application for a charter. Line is to be four miles long. The incorporators are F. D. M. Strachan, Frank D. Aiken, E. F. Coney, C. Downing and A. Fendig of this city, and George P. Walker, George F. Armstrong and Harry D. Strachan of Savannah, with Ernest L. Simpson and Lewis H. Spence of New York.

Chattanooga, Tenn.—D. J. Duncan, general manager of the Chattanooga Railways Co., is reported as saying that the company contemplates spending about \$450,000 for improvements, including extensions.

Fayetteville, N. C.—The Fayetteville Street Railway & Power Co. is reported to have begun construction of its line from Fayetteville to Hope Mills, seven miles. W. D. McNeill is president and Jerre Respess is engineer in charge of construction.

Danville, Ky.—The Danville Light, Power & Traction Co. contemplates building a street railway, and C. J. Perkins of the General Electric Co., Schenectady, N. Y., is investigating. This line may be eventually connected with an interurban system reaching Lancaster, Stanford, Hustonville, Johnson City and Harrodsburg, Ky. C. M. Jenkins, manager of the railway company, is reported as saying that funds are assured for a mile of line.

Hot Springs, Ark.—A franchise has been granted by the City Council to the Hayes Bros. I. I. & Real Estate Co. for an electric street railway.

Jacksonville, Fla.—George W. Clark has given bond to the Board of County Commissioners for \$10,000 to guarantee the building of a railroad from the city limits to Panama Park within a year.

Kansas City, Mo.—The Kansas City Railway & Light Co. has authorized \$5,500,000 of notes, of which \$2,500,000 will be used for extensions and other improvements, while the balance will be employed for refunding.

Laurel, Miss.—The Gulf States Investment Co. of Laurel has, it is reported, been granted a franchise for a street railway.

Louisville, Ky.—Pinkney Varble, a local real estate man, is reported to be promoting a plan for suburban electric railways in which Eastern capital may be interested.

San Angelo, Texas.—J. H. Ransom of hereford, Texas, has, it is reported, been granted a franchise for 25 years for an electric street railway; capital about \$200,000, and work is to begin within a year. J. A. Williams of San Angelo represents the company; capital \$200,000. Officers: J. H. Ransom, president; W. T. Noblett, San Angelo, vice-president; J. A. Williams, secretary and treasurer.

San Antonio, Texas.—The San Antonio Traction Co. has begun construction upon the extension of its North Flores Street line,

about two miles long. The Hot Wells line is also being built.

Sapulpa, I. T.—C. R. Reynolds, manager of the Street Railway Co., is reported as saying that an interurban electric railway to the oil fields will be built, including a street railway, by February next.

Temple, Texas.—The Belton-Temple Traction Co., it is reported, contemplates building extension in Temple.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Alcohol Machinery.—Feld & Dick, 813 South Central street, Knoxville, Tenn., want to correspond with manufacturers of machinery for making denatured alcohol.

Baling Press.—Murray Griffen, York, S. C., wants catalogues and prices of baling press.

Bed-springs Machinery.—J. E. Pryor, Rock Hill, S. C., wants machinery for manufacturing wire and other kinds of bed springs.

Belting.—Culver Tie & Timber Co., Mobile, Ala., wants belting.

Belts.—Damascus Lumber Co., James Dowler, general manager, Damascus, Va., wants belts.

Boller.—Hillsboro Cotton Mills, Hillsboro, Texas, wants boller.

Boiler.—See "Miscellaneous Supplies."

Boiler.—Sperry & Lukins, Artesia, N. M., want prices on new or second-hand firebox boiler, 25 or 30 horse-power, mounted or unmounted.

Boilers.—Culver Tie & Timber Co., Mobile, Ala., wants boilers.

Boilers.—Quanah Electric Light & Ice Co., Quanah, Texas, wants two boilers.

Bottling Machinery.—T. B. Spratt, Fort Mill, S. C., wants prices on bottling-works equipment.

Bridge.—United States Engineer Office, 415 Custom-house, Cincinnati, Ohio. Sealed proposals for constructing service bridge at lock No. 1, Big Sandy river, Catlettsburg, Ky., will be received until September 3. Information furnished on application. J. G. Warren, Major, Engineers.

Bridge.—County Commissioners will receive bids until October 9 for construction of \$50,000 bridge across St. Johns river at Palatka, Fla.; plans and specifications to be seen at office of County Clerk; further information to be obtained from County Engineer R. R. Price.

Bridge Construction.—Yazoo County Board of Supervisors, Yazoo City, Miss., will open bids September 2 for construction of following bridges: Over Silver creek at Campbellsville; across slough on new road near mouth of Lake George; over prong of Atchafalaya on Richmond plantation, and over slough near Wolf lake; also for reflooring and new banisters on iron bridge over Panther creek. Bond to keep bridges in repair for five years will be required; S. S. Griffin, clerk.

Building Materials.—North American Builders' Co., Chattanooga, Tenn., will need prices from quarries and on all kinds of building material.

Building Material.—Woodmar Sand & Stone Co., Ocala, Fla., wants all kinds of building material.

Cement.—A. M. McMillan, secretary church building committee, Pensacola, Fla., wants Portland cement.

Cement.—North American Builders' Co., Chattanooga, Tenn., will need prices on cement.

Cement Plant.—Piedmont Slate & Cement Co., Austell Building, Atlanta, Ga., wants to correspond with manufacturers of machinery for Portland-cement plant.

Clay Conduit.—Rhode Island Company, Spray, N. C., is in market for multiple vitrified clay conduit for cable, approximately one inch in diameter. Quote lowest price

and earliest shipment. (See "Conductor Cable.")

Clay Workers.—A. A. Coventry, Maryville, Tenn., invites correspondence from parties interested in fuller's earth or kaolin.

Concrete Conduit and Dredging.—Drainage District No. 1, Pulaski county, Joe Asher, County Clerk, Little Rock, Ark., will open proposals September 7 for construction of improvements estimated to cost \$76,500. Work to consist of seven miles open ditch, requiring 143,000 cubic yards of earth excavation; reinforced concrete conduit 84 inches in diameter and 2635 feet long. Plans and specifications on file in office of Joe Asher and Lund & Hill, civil engineers. Complete plans and specifications furnished by engineers upon receipt of \$10.

Conductor Cable.—Rhode Island Company, Spray, N. C., is in market for following conductor cable, prompt shipment: 3-conductor No. 8, B. & S., 7 strands, 3-32 rubber on each conductor, stranded together with jute fillers, with 5-64 lead covering; 3-conductor, No. 6, B. & S., 7 strand, same as preceding. Quote lowest price and earliest shipment. (See "Clay Conduit.")

Cranes.—See "Miscellaneous Supplies."

Creamery Machinery.—E. Foerster, Rosenberg, Texas, wants catalogues and prices of creamery machinery.

Distilling Machinery.—See "Alcohol Machinery."

Dredges.—J. F. Donahoo, Munsey Building, Washington, D. C., wants two dredges, complete, with clam-shell buckets.

Dredging.—Sealed proposals for dredging in Occoquan, Urbana and Carter's creeks and Mattaponi river, Virginia, will be received at United States Engineer Office, 22d and K streets N. W., Washington, D. C., until September 18. Information on application. Spencer Cosby, Major, Engineers.

Dredging.—Sealed proposals, endorsed "Proposals for Dredging," will be received at Bureau of Yards and Docks, Navy Department, Washington, until September 7 for dredging and removing about 20,000 cubic yards of material from channel, navy-yard. Specifications can be obtained at bureau or from commandant of yard. R. C. Hollyday, Chief of Bureau.

Dredging.—United States Engineer Office, Custom-house, New Orleans, La. Sealed proposals for dredging in Southwest Pass, Mississippi river, will be received until September 10. Information furnished on application. J. F. McIndoe, Captain, Engineers.

Dredging.—U. S. Engineer Office, 22d and K streets N. W., Washington, D. C. Sealed proposals for dredging in Occoquan, Urbana and Carter's creeks and Mattaponi river, Va., will be received until September 18. Information furnished on application. Spencer Cosby, Major, Engineers.

Engine.—Culver Tie & Timber Co., Mobile, Ala., wants 25-horse-power portable engine.

Dredging and Filling.—Fort Moultrie, S. C., August 15. Sealed proposals (in triplicate) will be received until September 14 for dredging and filling. Plans and specifications furnished on application. Address J. M. Fulton, Quartermaster.

Earth Filling.—Sealed proposals for about 20,000 cubic yards of earth filling behind lock walls at Plaquemine, La., will be received at U. S. Engineer office, Custom-house, New Orleans, La., until September 16; information on application; J. F. McIndoe, Captain, Engineers.

Electrical Equipment.—Baltimore (Md.) Board of Awards, City Hall, will receive bids until August 28 for electrical equipment for illuminating Baltimore street. Specifications can be obtained from Robert J. McCuen, Superintendent of Lamps and Lighting, City Hall.

Electrical Machinery.—National Machinery & Wrecking Co., 1914-1918 Scranton road, Cleveland, Ohio, wants to buy a number of 220-volt direct-current generators of 20 to 150 kilowatts in capacity, are machines from 20 to 100 lights.

Electrical Plant, etc.—Waurika Public Service Corporation, Waurika, O. T., will want bids on building and equipment for plant operating electrical, ice and water systems; cost of plant, \$50,000 to \$60,000; plans and specifications by Wm. F. Davis Engineering Co., Waurika, O. T.

Electric Lighting.—Rhode Island Company, Spray, N. C., wants bids on electric lighting of large addition to textile mills.

Electric Wiring.—L. J. Fleming, commanding quartermaster, Fort Sam Houston, Texas, will open bids September 12 for electric wiring. (See Building Note under Fort Sam Houston.)

Engine Castings.—John B. Forbes, Shiloh, N. C., wants to buy hot-air engine castings.

Engines.—See "Miscellaneous Supplies."

Engines.—Sperry & Lukins, Artesia, N. M., want to correspond with manufacturers of gasoline engines, with view to representing manufacturers; would want from three-horse-power to at least 35-horse-power engines.

Engines and Boilers.—Kingston Spoke Manufacturing Co., Kingston, Ark., wants engine and boiler.

Envelope Machines.—Dixie Advertising Agency, Newton, Miss., wants addresses of manufacturers of envelope machines.

Excelsior Machinery.—Murray Griffen, York, S. C., wants catalogues and prices of excelsior machines.

Exhaust Fans.—Kingston Spoke Manufacturing Co., Kingston, Ark., wants exhaust fans.

Fire-protection Equipment.—See "Sprinkler System."

Gas Machines.—M. B. Sanders, Little Rock, Ark., wants to correspond with manufacturers of acetylene-gas machines.

Gasoline Engines.—See "Engines."

Heating and Ventilating Equipment.—M. L. Kesler, general manager, Thomasville, N. C., wants prices on heating and ventilating equipment for orphanage infirmary building.

Heating Equipment.—Rhode Island Company, Spray, N. C., wants bids on heating plant for a new large addition to textile mills. Contract to be let by August 26.

Heating Plant.—Henry L. West, Jay J. Morrow, Commissioners, District of Columbia, Washington, D. C., will receive proposals until August 29 for furnishing and installing steam boiler and other accessories of heating plant at Home of Aged and Infirm at Blue Plains, Washington, D. C.

Ice Equipment.—Waurika Public Service Corporation, Waurika, O. T., will want bids on 25-ton ice plant.

Ice Machinery.—T. B. Spratt, Fort Mill, S. C., wants prices on ice-plant equipment.

Ice Machinery.—Quanah Electric Light & Ice Co., Quanah, Texas, wants compressor, condensers and coils and other ice machinery; also two boilers and deep-well pumps.

Ice Plant.—Rascon Manufacturing & Development Co., 320 Hennen Building, New Orleans, La., is in the market for second-hand ice plant from one to five tons capacity.

Iron Lathe.—George T. Parker, Kelford, N. C., wants prices on iron lathe.

Laundry Equipment.—Henry B. Ayer, Covington Laundry Co., Ltd., Box 233, Covington, La., wants prices on complete laundry equipment.

Laundry Machinery.—Box 263, Opelika, Ala., wants correspondence with manufacturers of laundry machinery for family work.

Levee Construction.—Board of Commissioners, Orleans Levee District, Masonic Temple, New Orleans, La., will open bids August 27 for construction of portion of new levee, with retaining walls, in Third district; length, 1700 feet; contents, 50,000 cubic yards of earthwork; 2700 linear feet of retaining wall and 100,000 feet board measure of lumber in revetment; deposit, \$500; bond, \$15,000. Portion of new levee, with retaining walls, in Fourth district; length, 1500 feet; contents, 30,000 cubic yards of earthwork and about 2500 linear feet of retaining wall; deposit, \$500; bond, \$10,000. Construction of banquet on land side of levee in Sixth and Seventh districts; length, 8500 feet; contents, 40,000 cubic yards of earth; deposit, \$300; bond, \$5000. For specifications, bidders' blanks and further information address above office; usual rights reserved; Charles T. Yenni, president; T. J. Duggan, secretary.

Lighting Fixtures.—Secretary of the Treasury, J. B. Reynolds, acting Secretary, Washington, D. C., will receive sealed proposals until September 4 for manufacturing and installing certain combination gas and electric-light fixtures in new custom-house, Baltimore, Md. Specifications obtained upon application; certified check required and usual rights reserved.

Lime.—A. M. McMillan, secretary church building committee, Pensacola, Fla., wants lime.

Limekilns.—Piedmont Slate & Cement Co., Austell Building, Atlanta, Ga., wants to correspond with makers of equipment for manufacturing lime, especially hydrated lime.

Lumber Wagon.—Damascus Lumber Co., James Dowler, general manager, Damascus, Va., wants horse-drawn lumber wagon with capacity for carrying 1000 to 2000 feet lumber; arranged to uncouple front from hind part of wagon so that one front carriage can be coupled to load on hind axle.

Machine Tools.—Sperry & Lukins, Artesia, N. M., want prices on drill press and on taper-attachment engine lathe, about 18-inch swing.

Machinery.—Hallettsville Hardware Co., Hallettsville, Texas, wants catalogues and prices of all kinds of machinery, with discount.

Mill Supplies.—Hillsboro Cotton Mills, Hillsboro, Texas, wants shafting, pulleys and other supplies.

Mill Supplies.—Kingston Spoke Manufacturing Co., Kingston, Ark., wants shafting, pulleys, hangers, belting, etc.

Miscellaneous Supplies and Equipment.—Proposals for refrigerators, locomotive coaling cranes, hoisting engines, vertical boiler, steam roller, etc., etc., will be received at office of D. W. Ross, general purchasing officer, Isthmian Canal Commission, Washington, D. C., until September 3. Blanks and general information relating to Circular No. 336 may be obtained from above office or the office of the assistant purchasing agents, 24 State street, New York; Customhouse, New Orleans; 1036 North Point street, San Francisco; 410 Chamber of Commerce Building, Tacoma, Wash.; also from Chief Quartermaster, Chicago; Depot Quartermaster, St. Louis; Depot Quartermaster, Jeffersonville, Ind., and Chief Quartermaster, Atlanta, Ga.

Oil.—Damascus Lumber Co., James Dowler, general manager, Damascus, Va., wants oil.

Overall Machinery, etc.—J. H. Haskins, Fort Gaines, Ga., wants to correspond with manufacturers of machines for making overalls, trousers, etc.

Paving.—Baltimore (Md.) Board of Awards, City Hall, will receive bids until August 28 to grade, curb, gutter and pave with macadam a portion of Chelsea terrace. Specifications and proposal sheets can be obtained from Commissioners for Opening Streets, Hoen Building, Lexington and Holliday streets.

Paving.—R. S. Williams, City Treasurer, Montgomery, Ala., will receive bids until September 2 for paving sidewalks on both sides of Cramer avenue, from McDonough to Decatur street, with hexagon blocks or Schillinger pavement and all necessary granite curbing and storm-water sewers in connection therewith, according to specifications in City Engineer's office; usual rights reserved; bids to be accompanied by certified check for \$100.

Paving.—E. E. Ellsworth, Recorder, Johnson City, Tenn., will open bids September 5 for paving of about 48,000 square yards of street surface with vitrified brick, bitulithic, asphalt, hassam or other material; about 22,000 square feet concrete sidewalk, 4600 linear feet concrete curbing and 4200 feet eight-inch vitrified sewer, with all necessary Ys, manholes, flush tanks, etc.; all according to plans and specifications on file in office of L. N. Wilson, Jr., City Engineer; certified check or approved bond in sum of 10 per cent. of amount of bid required; usual rights reserved. Specifications can be obtained from the City Engineer.

Paving.—City Clerk, Elkins, W. Va., will open bids August 24 for 1270 feet of paving on Harrison avenue; also for curbing of stone, concrete or brick. Plans and specifications can be seen at office of City Engineer; C. H. Scott, chairman street committee.

Paving.—Sealed proposals will be received at office of City Clerk, Hattiesburg, Miss., until August 28 for construction of about 10,300 square feet of concrete work at Main and Court streets and Eaton schoolhouse lots, and about 1280 square yards vitrified-brick pavement. Plans and specifications can be seen at office of J. H. Putnam, City Engineer. Certified check for 10 per cent. of amount of bid required. Usual rights reserved.

Paving.—City Council of De Land, Fla., will open bids September 9 for construction of about 5000 linear feet of sidewalks or foot pavements five feet wide. Specifications will be furnished on application to E. D. McLeod, City Clerk. Usual rights reserved.

Paving.—Glen Snodgrass, Recorder, New Martinsville, W. Va., will open bids August 31 for construction of 3000 yards of brick paving and 2000 feet of stone curbing; specifications on file in offices of recorder and W. J. Alexander, City Engineer. Each bidder must deposit \$100 with Recorder; usual rights reserved.

Paving.—City of Florence, Ala., will open bids September 3 for building cement sidewalks on Tennessee street, Royal avenue and Huntsville road according to plans and specifications of City Engineer; usual rights reserved; J. B. White, City Clerk.

Paving.—L. G. Adams, City Clerk, El Reno, Okla., will open bids September 5 for construction of 38,913 square yards of vitrified-brick pavement, with asphalt filler, to be laid on five-inch base of concrete; also 4922 linear feet of concrete curbing. Bids must be accompanied by certified check for 5 per cent. of amount of bid, conditioned that bidder enter into contract within 10 days; usual rights reserved; specifications on request.

Piledriver.—J. F. Donahoo, Munsey Building, Washington, D. C., wants piledriver complete with 3000-pound hammer.

Plumbing.—L. J. Fleming, Constructing Quartermaster, Fort Sam Houston, Texas, will open bids September 12 for plumbing. See Building Note under Fort Sam Houston.

Pump.—Tar River Oil Co., Tarboro, N. C., is in the market for new or second-hand underwriter's 500-gallon fire pump.

Pumps.—Quanah Electric Light & Ice Co., Quanah, Texas, wants deep-well pumps.

Rails.—Damascus Lumber Co., James Downer, general manager, Damascus, Va., wants second-hand steel rails.

Railway Equipment.—Gallimore-Martin Lumber Co., Holly, La., will want within next few months three miles 30-pound steel rails, engine and log cars.

Railway Rails.—J. F. Donahoo, Munsey Building, Washington, D. C., wants 100 tons of 25-pound, 175 tons of 30 and 35-pound, 145 tons of 40-pound, 400 tons of 50-pound and 85 tons of 60-pound relaying steel rails for Southern and Western delivery. State point of inspection.

Road Construction.—Fort Moultrie, S. C., August 15. Sealed proposals (in triplicate) will be received until September 14 for construction of roads and walks. Plans and specifications furnished on application. Address J. M. Fulton, Quartermaster.

Road Improvements.—Board of Greene County Road Improvement Commissioners, Henry R. Brown, chairman, Greeneville, Tenn., will open bids August 22 for grading about 50 miles and macadamizing or graveling about 40 miles of road; usual rights reserved; certified check, \$250. Specifications and plans can be seen at office of E. C. Brown, engineer in charge.

Road Roller.—See "Miscellaneous Supplies."

Roofing.—M. L. Kesler, general manager, Thomasville, N. C., wants prices on steel shingles for orphanage infirmary building.

Roofing, etc.—Geo. T. Parker, Kelford, N. C., wants catalogues and prices on roofing materials, siding and ceilings.

Safe.—M. R., care Manufacturers' Record, wants small second-hand double or triple time-lock burglar-proof safe.

Sewer Construction.—See "Water-works."

Sewer Construction.—E. E. Ellsworth, Recorder, Johnson City, Tenn., will open bids September 5 for construction of 4200 feet eight-inch vitrified sewer, with all necessary Ys, manholes, flush tanks, etc. (See Paving.)*

Sewer-pipe Machinery.—Thos. J. Holmes, Natchez, Miss., wants to correspond with manufacturers of sewer-pipe machinery.

Sprinkler System.—John P. Allison, Concord, N. C., will be interested in purchase of sprinkler system.

Steam Boiler.—See "Heating Plant."

Steam Shovel.—Kimbball Lumber Manufacturing Co., St. Louis, Mo., wants steam shovel, about one yard, on wheels or otherwise.

Steel Frame Work.—A. M. McMillan, secretary church building committee, Pensacola, Fla., wants steel frame for central dome for \$100,000 church building.

Steel Piling.—U. S. Engineer Office, Room N, Custom-house, New Orleans, La. Sealed proposals for constructing interlocking steel-pile seawall at Fort St. Philip, La., will be received until August 30; information furnished on application; J. F. McIndoe, Captain, Engineers.

Stump-boring Machine.—Corinth Engine and Boiler Works, Corinth, Miss., wants stump-boring machine, to be operated by traction engine and to bore holes 12 inches diameter, 18 inches deep, in pine stumps.

Tank and Tower.—Sealed proposals, endorsed "Proposals for Steel Tank and Tower," will be received at Bureau of Yards and Docks, Navy Department, Washington, until September 14 for constructing steel tank and tower, Navy-yard, Norfolk, Va. Plans and specifications can be obtained at Bureau or from commandant of navy-yard named; R. C. Hollyday, Chief of Bureau.

Tank and Tower.—Sealed proposals, endorsed "Proposals for Steel Tank and Tower, Pensacola," will be received at Bureau of

Yards and Docks, Navy Department, Washington, until September 7 for constructing 100,000-gallon steel tank and tower, Navy-yard, Pensacola, Fla. Plans and specifications can be obtained at Bureau or from commandant of navy-yard named; R. C. Hollyday, Chief of Bureau.

Tanks.—New York Continental Jewell Filtration Co., 15 Broad street, New York, N. Y., wants price on six 8x20-foot steel tanks. Specifications on application.

Ventilating Equipment.—See "Heating and Ventilating Equipment."

Water Service.—See "Electrical Plant."

Water-softening Plant.—City engineering department, W. C. Burke, City Engineer, Oklahoma City, O. T., invites proposals until August 31 for installation of water-softening plant of 50,000 gallons daily capacity; bidder to furnish detailed plans and specifications, estimate of cost of installation and operation for 30 days, guarantee as to cost of treating water per 1000 gallons, etc.; certified check of 10 per cent. of amount of bid required; also will require bond from successful bidder.

Water System.—Sealed proposals, endorsed "Proposals for Water System," will be received at Bureau of Yards and Docks, Navy Department, Washington, until September 7 for installing water system, Navy-yard, Pensacola, Fla. Plans and specifications can be seen at Bureau or will be furnished by commandant of navy-yard named; R. C. Hollyday, Chief of Bureau.

INDUSTRIAL NEWS OF INTEREST

Brick Plant for Sale.

An established brick plant, equipped with modern machinery, and including an abundance of clay for manufacturing, is offered for sale by J. A. Shields, Dawson, Ga.

Sugar Plantation for Sale.

A Louisiana sugar plantation said to be netting a profit of \$50,000 annually is offered for sale by its owner. For full details address J. M. Lane, 416 Carondelet street, New Orleans, La.

Removes San Francisco Offices.

The Electric Storage Battery Co. of Philadelphia has removed its San Francisco sales offices from the temporary location at 11 Hawthorne street, San Francisco, to the Crocker Building, San Francisco, where they will be permanently located.

Reinforced Chimney Completed.

The Metal Concrete Chimney Co., 1523 Chemical Building, St. Louis, Mo., has completed the construction of one reinforced chimney for the McIntosh Cotton Mills at Newnan, Ga. This chimney is 72 inches in diameter and 125 feet high. Its construction employs the use of the panel effect at the top, which was mentioned when describing this system of construction in the Manufacturers' Record several months ago.

Texas Fruit and Truck Belt.

The city of Tyler, Texas, is located in the midst of a fruit and truck belt which is rapidly developing. Besides its advantages for the production of food, the section around Tyler has general resources for farmers, merchants and manufacturers to avail themselves of, and strong efforts are being made at this time to locate more people. Interesting and valuable data regarding Tyler and its tributary territory can be obtained by addressing the secretary of the Commercial Club.

Establishes Another Southern Office.

In the latest issue of the Sprinkler Bulletin, a publication of the General Fire Extinguisher Co., Union Trust Building, Providence, R. I., announcement is made that the company has established an office and plant at New Orleans, La., the third in the South. This company manufactures the Grinnell automatic sprinkler, fire-extinguishing apparatus, steam and hot-water heating plants, boiler connections and hydrant piping, wrought and cast-iron pipe, fittings for steam, water and gas, etc.

For Duval Metallic Packing.

The Power Specialty Co., 111 Broadway, New York, has recently concluded arrangements whereby it has secured the exclusive sale of Duval metallic packing in this country, Canada and Mexico. It will carry a complete stock of this packing in standard sizes, enabling it to fill orders promptly. This company has just received from the press a new and enlarged catalogue descriptive of the Foster superheater and other steam specialties, including the packing mentioned. Copies forwarded upon request.

Water-wheel.—High Falls Manufacturing Co., High Falls, N. C., wants new or second-hand water-wheel.

Water-works.—Oconee County Commissioners, Walhalla, S. C., will open bids August 29 for installation of water and sewer system. Plans and specifications now on file with clerk of board. Bond for double amount of bid required; usual rights reserved; D. F. McAllister, Supervisor.

Water-works.—Royse City, Texas, will need equipment for \$15,000 water-works system; R. Z. Dyer, Mayor.

Well Drillers.—Gibert C. White, Durham, N. C., wants to correspond with drillers of artesian wells equipped with outfit for testing capacity of wells.

Wire-weaving Machinery.—J. L. Pennington, 309 Reynolds Building, Fort Worth, Texas, wants to correspond with manufacturers of wire-fabric weaving machinery.

Woodworking Machinery.—See "Stump-boring Machine."

Woodworking Machinery.—High Falls Manufacturing Co., High Falls, N. C., wants planer and matcher.

Woodworking Machinery.—Kingston Spoke Manufacturing Co., Kingston, Ark., wants lathes, tenoners, throaters, facers and sanders.

Woodworking Machinery.—Geo. T. Parker, Kelford, N. C., wants prices on wood lathe, shaper, etc.

be about 240,000 bricks per day. An interesting feature in connection with the plant is that a Southern manufacturing company is erecting the structures and furnishing and installing the equipment. This is the Morris Sherman Manufacturing Co., foot of West 6th street, Chattanooga, Tenn., which designs and builds complete steam plants, boat equipments, sand-lime brick plants of any capacity, marine and stationary boilers, condensers, refuse burners, tanks, towers, standpipes, etc.

Itawamba Engineering Co.

Considerable engineering and contracting work is being done in the territory tributary to St. Louis, and large quantities of railroad and contractors' supplies are in demand. This situation has naturally attracted the attention of engineering companies, and among those catering to needs of the section mentioned is the Itawamba Engineering Co., offices in Chemical Building, St. Louis, Mo. This company was organized in 1904 for the purpose of dealing in railroad and contractors' supplies and engaging in general engineering and contracting. It constructs bridges, viaducts, culverts, foundations, etc., and is a specialist in all classes of plain and reinforced concrete construction. In engineering the company makes a specialty of all kinds of railroad work. Mr. Edwin C. Finley is president and Paul Baldridge is secretary-treasurer.

Buckeye Salesmen Meet.

The third annual sales conference of representatives of the Buckeye Electric Co. of Cleveland, Ohio, was held in Cleveland on August 8, 9 and 10. Among interesting features of the conference were discussions on factory topics, a "Review of New Types of Lamps on the Market," by Mr. Sawyer; "The Relation of the Home Office to the Sales Organization," by Mr. Hartman; "A New Man's Impressions," by Mr. Slocumb, and a number of other papers and talks. Several social features contributed to the entertainment of the representatives, among which was the annual dinner at the Hotel Euclid. Southern representatives in attendance included H. E. Wells of Dallas, Texas; P. R. Slocumb, Fayetteville, N. C.; Messrs. Westbrook and Everett of Westbrook Bros. Company, Greensboro, N. C., and O. F. Asbury of the American Machine & Manufacturing Co. of Charlotte, N. C.

Increasing Its Facilities.

In order to meet the growing demand for its products the A. Gilbert & Sons Brass Foundry Co., 2024 Eugenia street, St. Louis, Mo., has purchased a site on Forrest Park boulevard 75x180 feet, and is erecting a new plant for the manufacture of its several grades of babbitt, brass and anti-frictional metals. The plant will consist of a one-story structure with a two-story front, the second floor to be used for offices. It will have a roof of the sawtooth pattern, supported on iron beams, leaving the ground floor clear of pillars, on which will be private lockers, shower baths, etc., for the use of its employees. The plant will cost about \$25,000. Among the products manufactured by the A. Gilbert & Sons Brass Foundry Co. are the Jovian babbitt metal, Velox bronze, several grades of babbitt and anti-frictional metals for different purposes, solders, ingot metals, aluminum castings, etc.

Agrippa Chain Pipe Wrench.

An efficient wrench for use on fittings and in such places where the ordinary type of wrench cannot be successfully used is always in demand. A wrench of this character, which is said to be capable of operating in tight, narrow places and of biting on irregular forms, is manufactured and sold by Messrs. J. H. Williams & Co., manufacturers of drop forgings, 150 Hamilton avenue and Richards street, Brooklyn, N. Y. The wrench is made of all-wrought steel, with a drop-forged, saw-tempered jaw permanently fastened in milled pocket to a powerful solid forged steel handle. The chain is longer than in wrenches for pipe only and swings from the center, making it capable of instant use with either side of the jaw. A claim for it is that its parts are interchangeable and that no trouble is experienced in handling short nipple and flange connections or jobs with a variety of outlets.

TRADE LITERATURE.

Bryan-Marsh Tantalum Lamp.

It is claimed for the Bryan-Marsh Tantalum lamp that it delivers one candle for every two watts of current and that its brilliant white light is particularly suitable for stores, show windows, etc., where true-color values are to be determined. As compared with other incandescent lamps, it is also

sold to be economical. The Ewing-Merkle Electric Co., 1106 Pine street, St. Louis, Mo., offers this lamp, and has issued a folder which embodies a proposition the company makes for replacing old lamps with the Bryan-Marsh Tantulum. The offer is good for 60 days from August 5.

Austin Pioneer Dump Wagon.

The manufacturer of the Austin dump wagon has been building rock and earth handling machinery for nearly 25 years, having been one of the first to make a four-wheeled wagon that would automatically discharge its load from the bottom. The company has a large and modernly-equipped factory, and has given much study to the manufacture of labor-saving implements for contractors. The Austin dump wagon is manufactured by the Austin Manufacturing Co., Manhattan Building, 307 Dearborn street, Chicago, Ill., and is comprehensively described and illustrated in a new catalogue now being distributed.

Thor Pneumatic Tools.

In presenting its catalogue No. 8, which supersedes all former issues, the Independent Pneumatic Tool Co., main offices First National Bank Building, Chicago, Ill., states that "Thor" pneumatic tools are continuing their success and daily proving their worth in practical service. This condition has been attained by furnishing tools of modern design, made from carefully-selected materials, machined with accuracy and thoroughly tested and proven for practical use. "Thor" pneumatic tools and appliances are described in detail in the catalogue, which is presented in a cloth cover, and contains many photographic views.

Ferro-Concrete Construction.

Owing to the advancement and improvements in building and construction, thorough investigation is essential not only of the engineering and methods practiced, but of the responsibility, experience and honesty of contractors employed. Among engineers and contractors who invite an exhaustive investigation of their methods of construction is the Ferro-Concrete Construction Co. of Cincinnati, Ohio, branch office, Seattle, Wash. This company has issued its Bulletin F-31, a pamphlet illustrating and describing in detail construction work which it has done or is doing, including that on footings, piers, foundations, piling, retaining walls, bridgework, coalbins, smokestacks, etc.

The Belt Book.

Until a few years ago the tanning industry is said to have been one of the least progressive in the world, and, according to Bulletin No. 72 of the census of manufactures for 1905, improved methods were slow of adoption. The use of machinery was discouraged, new processes gained favor with difficulty, and old-style methods and ideas prevailed, until the science of chemistry, which has done much for other industries, finally found recognition and has since revolutionized certain branches of the tanning industry. The Belt Book, a magazine designed for users of belting and intended to aid in the progress of tanning and other leather industries, is being circulated by the Charles A. Schieren Company, Schieren Building, Cliff and Ferry streets, New York city.

Pneumatic Tool Catalogues.

The Chicago Pneumatic Tool Co. is mailing two new catalogues, Nos. 23 and 24. No. 23 is a book of more than 100 pages and is devoted exclusively to Franklin air compressors. It contains descriptive matter and information relating to air compressors, and is combined with half-tone engravings of the machines and parts. Catalogue No. 24 is also a book of more than 100 pages, and covers elaborately the company's widely-known line of pneumatic tools and appliances, including "Boyer" and "Keller" hammers, "Little Giant" drills, sand rammers and hoists. Both books are printed in colors, conveniently indexed and strongly bound, thus making them books of reference as well as catalogues. Copies will be forwarded upon request. Address Chicago Pneumatic Tool Co., Fisher Building, Chicago.

Hydraulic Forging Presses.

Because its printed literature, consisting of about 800 illustrated sheets and covering machinery for a variety of purposes, is too large for general distribution, the Watson-Stillman Company of New York city prepares a series of subdivided catalogues, of which No. 70 has just been issued. This catalogue is not complete with respect to tools for machine-shop purposes, but is one of the most extensive yet printed where only

one class of hydraulic machine-shop tools is described and illustrated. The tools are hydraulic forging presses, and are used for forcing fits, driving broaching tools and for similar work. In the catalogue many sizes of tools have been added, and a number of pages contain descriptive data and illustrations which the company has not shown before. Offices of the Watson-Stillman Company are in the Havemeyer Building, 25 Dey street and 26 Cortlandt street.

Barber Refrigerating Machinery.

Artificial refrigeration has developed from experimental to an applied science and is extensively employed by breweries, cold-storage houses and other establishments where it is necessary to maintain low temperatures. As its use has become more and more extensive, so the demand for refrigerating and ice-making machinery has grown. Of manufacturers of this class of machinery the Creamery Package Manufacturing Co. of 182-188 East Kinzie street, Chicago, Ill., has made rapid progress in the expansion of its business. Attesting this expansion is the announcement that the company has recently completed a new plant at De Kalb, Ill., which is equipped with every mechanical convenience for manufacturing its products. The company manufactures the Barber refrigerating and ice-making machinery, and is distributing its catalogue No. 51, which illustrates and describes in detail the whole and component parts of these equipments.

Expanded Metal in Concrete Construction.

Expanded metal has been a staple in the commercial list of constructive materials for a number of years, but is nevertheless regarded as a unique product in the mechanical world. As a material it is nothing more nor less than a plain sheet of steel opened into meshes of any desired size or section of strand; at the same time it is a very large factor in structural operations. It is made by an automatic machine which receives the sheet cold and at a single stroke splits and opens the meshes simultaneously. No material is wasted, no pieces are lost, and the elastic limit of the steel is increased, the finished sheet of expanded metal being from three to eight times as large as the sheet of steel, according to the meshes. This material has found a wide field of practical adaptation in structural work and is largely used for the manufacture of guards, railings, lockers, concrete reinforcement, etc. The expanded-metal system as used in fireproof building construction and reinforced construction is accurately described and illustrated in an interesting publication which the Expanded Metal Engineering Co., Brunswick Building, 225 Fifth avenue, New York city, has recently issued.

To Clean a Boiler.

Boiler scale is a foe to those who operate steam plants. The scale-forming substances in feed water are carbonate of lime, sulphate of lime or gypsum and magnesia. These are soluble in cold water and in water of moderately high temperature, but insoluble at a temperature of 303 degrees, corresponding to an absolute steam pressure of 70 pounds. Scale-forming substances are precipitated by heating and evaporating the water. Part of the precipitation is deposited as mud and part settles on hot plates, tubes, crown sheets, side sheets or any place where these mineral substances may get in contact with the iron and form scale. In boilers that have a one-sixteenth-inch scale efficiency is decreased 30 per cent, thus requiring about 15 per cent. more fuel to get the required evaporation. Scale keeps the water from coming in contact with the plates, causing them to become overheated, which shortens the life of a boiler. The question that naturally confronts the steam user is, How can this scale be removed and its formation prevented at a minimum cost without injury to the boiler or loss of time? For this purpose "Magic" boiler compound is offered by the H. W. Johns-Manville Company, 100 William street, New York. Its action is natural, neither mechanical nor chemical. When introduced into the boiler it seeks the iron and, working its way between the scale and iron, causes the scale to loosen and fall off, and presents a surface to which no sediment will adhere. The company is issuing "How to Clean a Boiler," which gives information on this subject.

Another Southern Shipbuilding Plant

An important report in connection with the industrial development of Norfolk and its water-front is that another big shipbuilding plant will be established there. It is stated that Edward S. Cramp, for-

merly of the Wm. Cramp & Sons Ship & Engine Building Co. of Philadelphia, and George W. Norris of Edward B. Smith & Co., 511 Chestnut street, Philadelphia, have completed the purchase of waterfront property upon which they will locate a plant for repairing and building ships, vessels as large as battleships to be constructed, and about \$2,000,000 to be invested in buildings, docks and mechanical equipment. The land fronts 1000 feet on the main harbor, opposite the Norfolk & Western Railway station, with 1000 feet on Pescara creek, having 25 to 30 feet of water depth, and is reported as having cost \$95,000.

The Corporation and the Mob.

[*Wall Street Journal.*]

The *Wall Street Journal* feels that it has fairly earned the right to defend the investors of the United States against the mob spirit now seeking to lynch the corporations. It has earned this right because it has steadfastly during the past five years defended the investors against the anarchistic spirit within the corporations; because it has persistently advocated publicity and enforcement of law, and denounced unfair competition, brutal monopoly, corruption of politics, graft, speculative manipulation, dual transactions, deceptive bookkeeping, use of trust funds for "high finance" schemes, the rebate, the secret rate, the pass and all manner of special privilege by which one competitor obtained advantage of another to the public injury. These things were as much destructive of investment interests as any Socialistic program. It has supported President Roosevelt in his campaign for the establishment of publicity and the regulation of the corporations. It has at times criticized the acts of great financiers and powerful corporations for putting obstacles in the way of the advancement of such a degree of public control as would keep despotic monopoly in check and financial concentration from becoming so big as to threaten the very independence of the Government. It has done this in the face of much misconception of its motives and purposes.

But its independence during these years enables it now with all the more power to take a stand against the mob violence which is striking at property rights. It has never been "a court circular" of the "divine right" of capital to do as it pleases. It has criticized the corporations for many of their wrongs; it can now defend the corporations against wrong. It has defended the people against the injustice of the financial powers; it can now defend the financial powers against a public actuated by a spirit of revenge, and seeking in many cases confiscation.

It proposes to do so. A bad corporation is a stench in the nostrils of the people. It is necessary to quarantine it. Government regulation is simply establishing health board ordinances and limits.

But mob violence is a conflagration. It calls for the fire reserves and the police. More than that, it may require the formation of vigilance committees of investors for the maintenance of order and justice. An eminent banker this week suggested in a private interview that it might be necessary to form a committee to represent investing interests. The idea is a good one. Let us have such a committee, but to be effective it must not be one-sided. It must strike alike at wrong by corporations as well as wrong against corporations. This is the time to organize the investors of the country in defense of the

rights of private property and individual liberty, in advocacy of publicity and the strict accountability of trustees, and against the mob that is crying, "Lynch!" "Lynch!"

FINANCIAL NEWS

Review of the Baltimore Market.

Baltimore, Md., August 21.

In the Baltimore stock market during the past week it was very dull. United Railways common sold from 11½ to 11½; the trust certificates from 11½ to 11; the income bonds from 51 to 50½; the funding 5s from 79 to 78; the funding scrip at 79 and the 4s from 85½ to 85. Gas 6s changed hands at 103; do. 5s, 107½ to 107; do. 4½s, 93½ to 93; Seaboard 4s, 69 to 68; do. 10-year 5s, 93%; Cotton Duck 5s, 78½ to 79; G.-B.-S. incomes, 20% to 21. Bank of Baltimore sold at 117½; Citizens' Bank, 32½ to 32; Howard Bank, 12½; Fidelity & Deposit, 126 to 125; Maryland Casualty, 60.

Other securities were traded in as follows: Atlantic Coast Line stock, 77½ to 83½; Northern Central, 88 to 87; do. fractions, 88½; George's Creek Coal & Iron, 75; Georgia & Alabama Consolidated 5s, 102 to 102½; Lake Roland 5s, 110%; Lexington Railway 5s, 99; Baltimore City 3½s, 1930, 95; Savannah City 5s, 1909, 99½; Charleston Consolidated Electric 5s, 91½; Western Maryland 4s, 73 to 70; Baltimore City 3½s, 1940, 95; Anacostia & Potomac 5s, 100; Charleston & Western Carolina 5s, 106; City & Suburban 5s, 106½ to 106½; Merchants & Miners' Transportation Co. certificates, 85½; Atlantic Coast Line Consolidated 4s, 91½ to 91; Wilmington & Weldon 5s, 109½; Atlanta & Charlotte extended 4½s, 99; Baltimore City Passenger 5s, 102½; Georgia Southern & Florida 5s, 105½ to 105½; Georgia, Carolina & Northern 5s, 102½ to 102½; Alabama Consolidated Coal & Iron 6s, 86 to 85; Carolina Central 4s, 90; West Virginia Central 6s, 102½; Somerset Coal Equipment 5s, 1911, 95½; Baltimore Traction 5s, 108; Wilmington & Newbern 1st 4s, 94½.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended August 21, 1907.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	80	80
Atlantic Coast Line of Conn.	100	...	258
Georgia Sou. & Fla. 1st Pfd.	100	...	34
Norfolk & Portsmouth Trac. ....	...	...	30½
Seaboard Company Common....	100	10	14
United Railways & Elec. Co.	50	11	11½

Bank Stocks.	Par.	Bid.	Asked.
Citizens' National Bank.....	10	32½	33
Mercantile National Bank.....	100	171	171
National Bank of Baltimore.....	100	117	123
National Howard Bank.....	10	12½	12½
National Mechanics' Bank.....	10	25	25
Third National Bank.....	100	109	...

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
American Bonding Co.	25	45	...
Fidelity & Deposit.....	50	124	126
Maryland Casualty.....	25	60	60½
Mercantile Trust & Deposit.....	50	...	121
U. S. Fidelity & Guaranty.....	100	109	...

Miscellaneous Stocks.	Par.	Bid.	Asked.
Con. Cotton Duck Common.....	50	8	10
Con. Cotton Duck Pfd.	50	25	...
G.-B.-S. Brewing Co.	100	4	4½
Georges Creek Coal.....	100	74½	77

Railroad Bonds.	Par.	Bid.	Asked.
Albany & Northern 5s, 1946.....	50	...	...
Atlanta & Charlotte Ext. 4½s.....	99	...	...
Atlantic Coast Line 1st 4s, 1852.....	91	91½	90
Carolina Central 4s, 1949.....	...	87½	90
Charleston & West. Car. 5s, 1946.....	...	106	...
Florida Southern 4s, 1940.....	...	91	...
Georgia & Alabama 5s, 1945.....	...	102½	102
Georgia, Car. & North. 1st 5s, 1929.....	102	103	103
Georgia Pacific 1st 6s, 1922.....	...	113½	113½
Georgia Sou. & Fla. 1st 5s, 1945.....	...	106	...
Maryland & Penna 4s, 1951.....	...	92½	...
Petersburg, Class B 6s, 1926.....	...	117	120
Piedmont & Cum. 1st 5s, 1911.....	...	97	99
Richmond & Petersburg 6s.....	...	109	112
Savannah, Fla. & West. 5s, 1934.....	107	...	...
Seaboard Air Line 4s, 1950.....	67	70	...
Seaboard Air Line 5s, 10-year, 1911.....	94	...	...
Southern Railway Con. 5s, 1994.....	...	104½	106
Washington Terminal 3½s.....	...	85½	86
Western Maryland new 4s, 1952.....	...	69½	...
West Virginia Cen. 1st 5s, 1911.....	...	102½	...
Wilmington, Col. & Aug. 6s, 1910.....	...	102½	...
Wilmington & Wel. Gold 5s, 1955.....	...	109½	...
Wilmington & Weldon 4s.....	...	96	...

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5s, 1949.....	100	101	101
Baltimore City, Pass. 5s, 1911.....	102	102½	102½
Baltimore, S. P. & C. 4½s.....	90	92	...
Baltimore Traction 1st 5s, 1929.....	108	109	...
Central Ry. Con. 5s (Balto.) 1932, 108.....	...	...	...
Charleston City 5s, 1923.....	...	104	...
Charleston Con. Elec. 5s, 1939.....	...	104	...
City & Suburban 5s (Balto.), 1922, 106½.....	107	107	107
Knoxville Traction 1st 5s, 1928.....	...	104½	...
Lake Roland Elevated 5s, 1942.....	...	110½	112½
Lexington Ry. 1st 5s, 1949.....	...	98	99½
Macon Ry. & Lt. 1st Con 5s, 1953.....	...	94	...
Metropolitan 5s (Wash.), 1925.....	107	115	...
Norfolk Ry. & Lt. 5s.....	...	94	...
United Railways 1st 4s, 1949.....	85	85½	...
United Railways Inc. 4s, 1949.....	50	50½	...
United Railways Funding 5s.....	78	78½	...

Miscellaneous Bonds.	Par.	Bid.	Asked.
Alabama Con. Coal & Iron 5s.....	80	85	...
Consolidated Gas 6s, 1910.....	...	102½	103½
Consolidated Gas 5s, 1939.....	...	107	...
Consolidated Gas 4½s.....	...	92½	93½
G.-B.-S. Brewing 1sts.....	50½	51½	...
G.-B.-S. Brewing 2d Incomes.....	...	20½	21½
Mt. Vernon-Woodby Cot. Duck 5s.....	78½	79½	...
United Elec. Lt. & Power 4½s.....	...	91½	...

[For Additional Financial News, See Pages 44 and 45.]

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15
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50%
78%
85
03%
93%
51%
21%
79%
91%

See